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Volume 8

QUESTIONS

Mary Jo Wagner, MD, FACEP
Editor-in-Chief

Program Director, Synergy Medical Education Alliance
Emergency Medicine Residency Program, Saginaw, Michigan
Professor, Division of Emergency Medicine, Michigan State University
College of Human Medicine, East Lansing, Michigan



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1. A 78-year-old woman is transferred from a long-term care facility with vomiting and increased confusion. She has a history of dementia, hypertension, type 2 diabetes mellitus, and mild chronic renal insufficiency. Vital signs are blood pressure 106/45, pulse 75, respirations 24, temperature 38.9°C (102°F), and oxygen saturation 95% on room air. On physical examination, the patient is frail, confused, and minimally cooperative with the examination. The skin is intact without rash. Which of the following tests is most likely to reveal the diagnosis?
 - A. Abdominal and pelvic CT
 - B. Blood culture and WBC count
 - C. Chest radiography and urinalysis
 - D. Head CT with lumbar puncture

2. A 32-year-old woman presents with chest pain that has worsened over the past 2 months. She says it gets worse when she lies flat or exercises and after she eats or drinks quickly. She has no significant past medical history, but her husband says she has lost about 10 pounds recently and has been throwing up undigested food. What are the expected diagnostic findings?
 - A. Diffuse ST-segment elevation and PR-interval depression
 - B. Dilated esophagus proximal to a beaklike lower esophageal sphincter
 - C. Gastric inflammatory changes
 - D. White matter plaques in the brainstem

3. What is the medication of choice in the initial treatment of acute aortic dissection without shock?
 - A. Diltiazem
 - B. Esmolol
 - C. Nitroglycerin
 - D. Sodium nitroprusside

4. A 48-year-old man presents with pruritic rashes after a hiking trip (Figure 1). The affected body areas were not covered by clothing. Which of the following statements regarding this condition is correct?
- Clothes worn during hiking should be discarded
 - Previous sensitization prevents recurrence
 - The rash is spread by ruptured bullae
 - Treatment for significant cases includes oral steroids



Figure 1

5. Which of the following statements regarding adrenal insufficiency is correct?
- Cytomegalovirus is the most common cause worldwide
 - Hyperkalemia is common in secondary adrenal insufficiency
 - Hypernatremia is common in both primary and secondary adrenal insufficiency
 - Hypotension fails to respond to standard resuscitation
6. The latent phase of acute radiation syndrome caused by whole-body irradiation is characterized by:
- A symptom-free interval followed by the manifest illness phase
 - Early decline in the lymphocyte count followed by declines in granulocytes and platelets and resultant pancytopenia
 - Self-limiting symptoms that usually include autonomic nervous system response with anorexia, nausea, and vomiting
 - Severe nausea, vomiting, diarrhea, and abdominal pain with denuding of the gastrointestinal mucosa and fulminant enterocolitis

7. A 12-year-old girl presents with left ear pain. The external ear appears normal, but the tragus and pinna are tender to manipulation. The ear canal is swollen, and the tympanic membrane cannot be visualized. Which of the following is an important element in her treatment?
 - A. Cortisporin otic solution used rather than suspension
 - B. Oral corticosteroids to reduce canal swelling
 - C. Temporal bone CT to rule out skull-based osteomyelitis
 - D. Topical antibiotics applied using an ear wick

8. A 34-year-old woman with a history of leukemia presents with bleeding gums. She says that her menses is heavier and longer than usual, that she has never had bleeding from her gums before, and that she has been bruising easier. Review of tests performed during a recent office visit shows normal results; current testing reveals abnormalities: Hgb, 10 g/dL; platelets, 20,000/mcL; PT, 17 seconds; PTT, 30 seconds; and an elevated D-dimer level. Which of the following is the likely diagnosis?
 - A. Blast crisis
 - B. Disseminated intravascular coagulation
 - C. Liver cirrhosis
 - D. Primary fibrinolysis

9. A 44-year-old woman presents with pain in the fingers of both hands. She says they started to hurt while she was mixing drinks but that it has happened before. She is otherwise asymptomatic and denies trauma and any other medical problems. On examination, her hands are pale white, and the skin is shiny and taut. What is the most appropriate next step?
 - A. Administer prazosin intra-arterially
 - B. Arrange urgent interventional radiology consultation
 - C. Start hand-warming and consider oral nifedipine
 - D. Start tPA and heparin

10. Which of the following presentations is most consistent with *Entamoeba histolytica* infection?
 - A. Copious, watery stools for 3 days with overt signs of significant dehydration
 - B. Diarrhea with occasional blood and mucus and intermittent fever with abdominal pain for 3 weeks
 - C. Nonbloody diarrhea with bloating and flatulence for 3 weeks
 - D. Several episodes of nonbloody diarrhea for 3 days with nausea, vomiting, and low-grade fever

11. A 45-year-old man presents after outpatient MRI reveals cauda equina syndrome. Which of the following additional findings is most likely present?
 - A. Decreased deep tendon reflexes
 - B. Distal motor weakness greater than proximal motor weakness
 - C. Saddle anesthesia
 - D. Urinary retention

12. A 45-year-old man presents with persistent seizure activity. The paramedics report that he has exhibited tonic-clonic movements for the past 35 minutes. Which of the following features is characteristic of this patient's condition?
 - A. Increased incidence in persons 25 to 50 years old
 - B. Ongoing seizure activity that persists after tonic-clonic movements end
 - C. Seizure activity that is easily controlled with a single agent
 - D. Seizure activity that recurs after the patient returns to baseline mental status

13. The suspect in a sexual assault investigation is brought to the emergency department for forensic examination. Which of the following is a required element of this evaluation?
 - A. Law enforcement presence
 - B. Performing the examination before interviewing the victim
 - C. Positive identification by the victim
 - D. Treatment for sexually transmitted diseases

14. Which of the following statements regarding management of drug psychoses from suspected phencyclidine toxicity is correct?
 - A. Activated charcoal should be used in multiple doses to limit the duration of symptoms and increase clearance
 - B. Associated seizures are typically resistant to treatment with phenytoin
 - C. It is safe to assume that the patient's altered mental status is not associated with an intracranial bleed
 - D. Performing a routine urine drug screen in the emergency department can confirm the diagnosis

15. A 36-year-old man presents with fever and abdominal pain. He is on continuous ambulatory peritoneal dialysis and says that the effluent was cloudy on the last pass. Which of the following organisms should treatment be directed against?
 - A. *Escherichia coli*
 - B. Fungus
 - C. *Proteus*
 - D. *Staphylococcus epidermidis*

16. A 50-year-old man presents with fever, dry cough, headache, and loss of appetite with nausea, vomiting, and watery diarrhea. He has been taking amoxicillin for 4 days but says he is feeling worse. Past medical history is unremarkable. Laboratory analysis reveals hyponatremia and elevated liver enzymes. Which of the following is the most likely diagnosis?
 - A. Legionnaire disease
 - B. Psittacosis
 - C. Q fever
 - D. Tularemia

17. A child who accidentally ingested her grandmother's glyburide developed hypoglycemia and a depressed level of consciousness that were reversed with the administration of dextrose by prehospital providers. Which of the following agents should be administered next?
 - A. Diazoxide
 - B. Glucagon
 - C. Octreotide
 - D. Somatostatin

18. Which of the following statements regarding multiple trauma is correct?
 - A. All critically ill trauma patients should be transported to the nearest facility
 - B. Mechanism of injury is not related to severity of injury
 - C. Overtriage leads to waste and exhausts valuable resources and should be avoided
 - D. Patients older than 55 years are at increased risk of death

19. Which of the following is a contraindication to the performance of arthrocentesis?
- A. Cellulitis overlying the site of needle insertion
 - B. Daily aspirin use
 - C. Possible septic arthritis
 - D. Urethritis and likely gonococcal arthritis
20. An emergency physician who switched jobs 6 months earlier just received notice that a claim was made against him on an event that occurred 1 year earlier at his previous job. Which of the following types of malpractice insurance coverage would most likely cover this claim if he had a single policy with no extra coverage purchased at his previous job?
- A. Claims-made policy
 - B. Hybrid policy
 - C. Occurrence-based policy
 - D. Prior acts coverage
21. Which of the following factors has the most prominent role in causing a patient to develop decubitus ulcers?
- A. Diabetes
 - B. Immobility
 - C. Infection
 - D. Neglect
22. Which of the following patients requires oral fluconazole treatment?
- A. 17-year-old girl with both dysphagia and odynophagia refractory to acid suppression therapy who also has multiple allergies
 - B. 27-year-old man with chest pain and severe odynophagia who also has asthma and is HIV positive
 - C. 47-year-old man with transport dysphagia for solids initially and now liquids who also smokes
 - D. 55-year-old man with halitosis, transfer dysphagia, and neck fullness

23. A 35-year-old woman presents with acute-onset sharp chest pain with nausea and vomiting. Vital signs include blood pressure 140/85, pulse 115, respirations 22, and oxygen saturation 98% on room air. A chest radiograph is obtained (Figure 2). Which of the following tests will most rapidly and specifically establish the diagnosis?
- A. Aortic angiography
 - B. CT angiogram
 - C. MRI
 - D. Transesophageal echocardiography

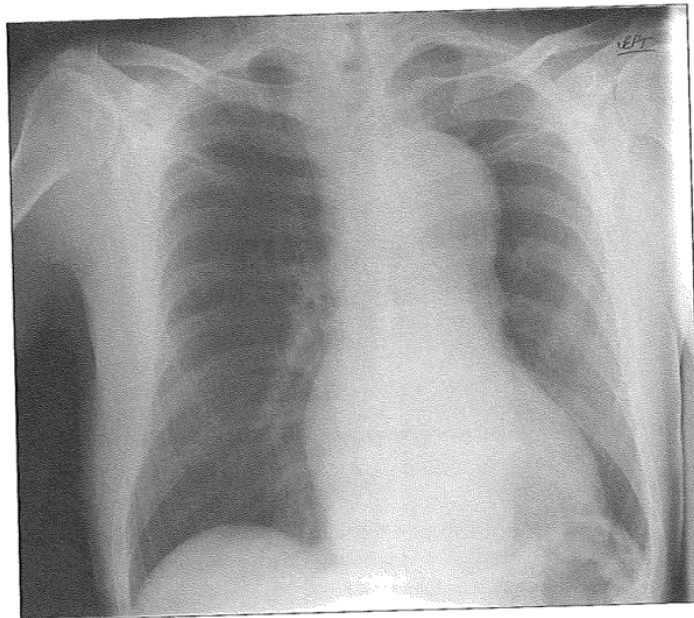


Figure 2

24. A 60-year-old man and his 1-year-old granddaughter present with pruritic rashes. The appearance is similar in both, but the rash is localized to the wrists and hands in the grandfather and as shown in Figure 3 in the granddaughter. Which of the following is the most appropriate treatment?
- A. Dicloxacillin
 - B. Doxycycline
 - C. Fluconazole
 - D. Permethrin



Figure 3

25. In a patient with diabetic ketoacidosis with a sodium level of 130 mEq/L and glucose 600 mg/dL, the serum sodium concentration:
- A. Represents pseudohyponatremia
 - B. Would be approximately 120 mEq/L in the absence of hyperglycemia
 - C. Would be approximately 138 mEq/L in the absence of hyperglycemia
 - D. Would be approximately 150 mEq/L in the absence of hyperglycemia

26. Which of the following statements regarding cold water immersion syndrome is correct?
- A. Cause of death is asphyxia secondary to inhalation of water into the lungs
 - B. Caused by cardiac dysrhythmia on sudden contact with water much colder than core temperature
 - C. Risk that it will occur is inversely proportional to the difference between the temperatures of the body and the water
 - D. Risk that it will occur is not reduced by wetting the head and face before contact with the water
27. A 42-year-old man with no cardiac risk factors presents with vertigo. History and physical examination findings that suggest a central rather than a peripheral cause include:
- A. Associated unilateral hearing loss
 - B. Difficulty with rapid alternating movements
 - C. Sudden onset of severe symptoms with vomiting
 - D. Symptom reduction following repeated Dix-Hallpike testing
28. A 26-year-old woman with a history of sickle cell disease presents with pain in her legs. She says it is her typical pain crisis and denies nausea, vomiting, or shortness of breath. Laboratory testing reveals the following: WBC count, 10,000/mcL; Hgb, 4 g/dL; and reticulocyte count, 0.5%. Electrolytes are normal. She responds well to pain medication. Which of the following treatments has been proved to be helpful for this condition?
- A. Antibiotic therapy
 - B. Exchange transfusion
 - C. Oxygen administration
 - D. Transfusion of packed red blood cells
29. A 40-year-old man with known HIV infection presents with shortness of breath, chest pain, and fever and night sweats that have progressively worsened. He says he previously used antiretroviral therapy but currently does not. On examination, he appears ill; diffuse tender lymph nodes and hepatosplenomegaly are noted. Ophthalmoscopic examination reveals fluffy white perivascular lesions. The expected CD4 level is:
- A. <50 cells/mcL
 - B. 50 to 100 cells/mcL
 - C. 100 to 200 cells/mcL
 - D. >500 cells/mcL

34. Which of the following medications is most likely to reduce alcohol craving without causing unpleasant side effects and is approved for the prevention of alcohol relapse?
- A. Buprenorphine
 - B. Disulfiram
 - C. Methadone
 - D. Naltrexone
35. A 21-year-old woman presents with her third bladder infection in the past 6 weeks. She has been taking nitrofurantoin and cephalexin. She says that the pain started 1 day earlier. She has no fever, chills, nausea, vomiting, diarrhea, or back pain. Pelvic examination reveals a watery vaginal discharge, but the examination is otherwise normal. Wet mount findings are normal. What is the appropriate treatment?
- A. Ceftriaxone once and ciprofloxacin for 14 days
 - B. Fluconazole in a single dose
 - C. Levofloxacin for 14 days
 - D. Trimethoprim-sulfamethoxazole for 10 days

36. A 35-year-old man who is HIV positive presents with fever, cough, and shortness of breath. Laboratory findings include an elevated LDH level and PaO_2 of 65 mm Hg. He is in mild respiratory distress. A chest radiograph is obtained (Figure 4). What is the most appropriate treatment?
- A. Ceftriaxone and azithromycin
 - B. Endotracheal intubation
 - C. Isoniazid, rifampin, pyrazinamide, and ethambutol
 - D. Steroids and trimethoprim-sulfamethoxazole

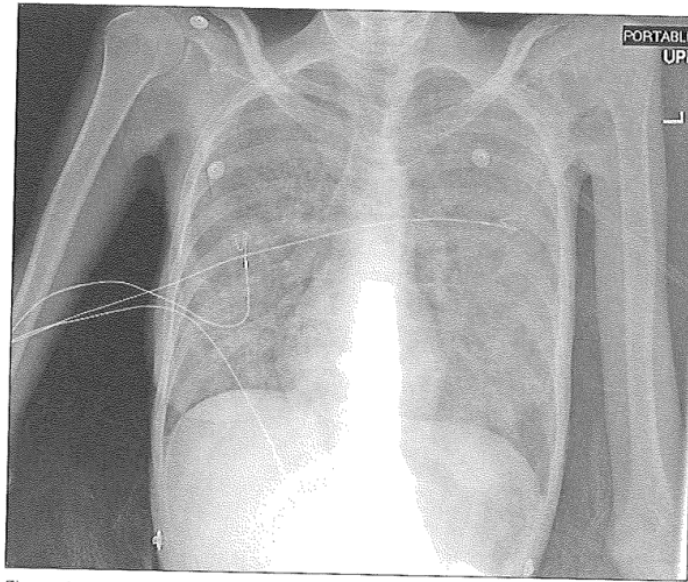


Figure 4

37. Which of the following best describes the demonstrated benefit of hyperbaric oxygen therapy for carbon monoxide poisoning?
- A. Reduces mortality rates
 - B. Reduces the risk of delayed neurologic sequelae
 - C. Reduces the risk of MI
 - D. Reduces time missed from work

38. A 24-year-old woman presents in cardiac arrest after being hit by a car as she crossed a street. She is pregnant; the uterine fundus is 8 cm above the umbilicus. Paramedics performed CPR en route with no return of pulses. Fetal heart tones are still present. The decision is made to perform a perimortem cesarean delivery in an attempt to save the fetus. Which of the following statements regarding this procedure is correct?
 - A. A low, horizontal incision should be made with careful attention to avoid injuring the bladder
 - B. CPR should be discontinued
 - C. If present, the anterior placenta should be incised to improve access
 - D. The height of the uterine fundus is not related to predicted outcome
39. An emergent lumbar puncture is performed on a woman with fever, headache, and a stiff neck. Her past medical history is notable only for hypertension and chronic atrial fibrillation. The procedure is successful, with minimal trauma, but later she begins to complain of local back pain at the site of the procedure, lower extremity dysesthesias, and urinary incontinence. What should be the primary concern?
 - A. Diabetic neuropathy
 - B. Epidural hematoma
 - C. Nerve damage
 - D. Spine abscess
40. What is the highest level Evaluation and Management code that can be used for a chart that includes four elements from History of Present Illness, six systems in Review of Systems, two areas under Past Medical, Family, and Social History, and five organ systems in the physical examination?
 - A. Emergency department visit level 2
 - B. Emergency department visit level 3
 - C. Emergency department visit level 4
 - D. Emergency department visit level 5
41. In a patient with confusion, a primary psychiatric disorder is suggested by:
 - A. Disorientation
 - B. Fluctuating level of consciousness
 - C. Gradual onset
 - D. Visual hallucinations

42. A 46-year-old obese woman presents with left groin pain and nonbloody emesis and fever. Physical examination reveals an ill-defined, 6-cm, firm, tender mass below the midportion of the left inguinal ligament. Radiographs are obtained (Figure 5). What is the appropriate next step in management?
- Admit for nasogastric tube decompression
 - Colonoscopy for sigmoid reduction
 - Emergent surgical consultation
 - Incision and drainage

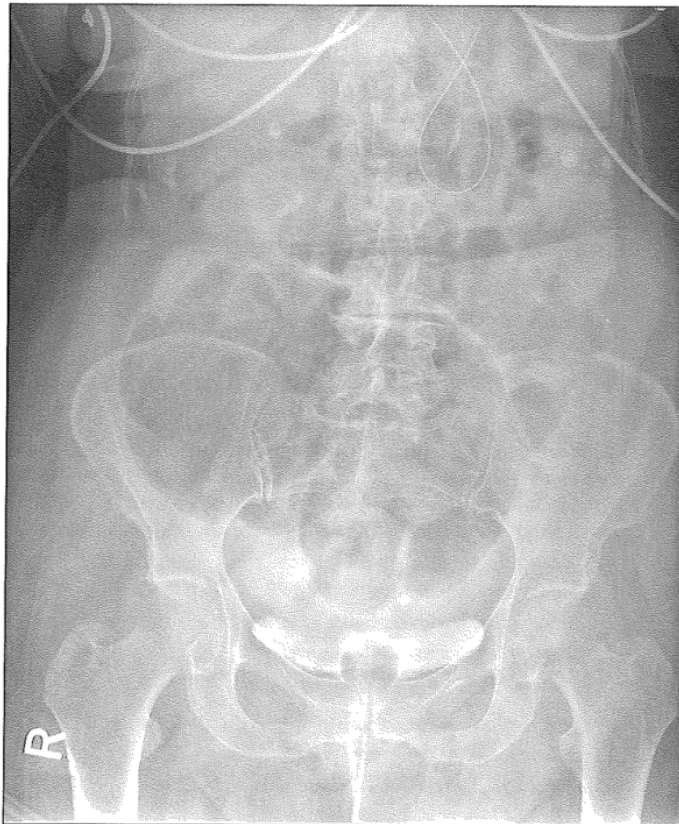


Figure 5

43. A 27-year-old woman presents with palpitations. She denies chest pain, shortness of breath, and lightheadedness. Vital signs are blood pressure 110/70, pulse 180, respirations 16, temperature 37.5°C (99.5°F), and oxygen saturation 97% on room air. An ECG is obtained (Figure 6). What is the initial intervention of choice to address the palpitations?
- A. Amiodarone 150 mg IV
 - B. Metoprolol 5 mg IV
 - C. Synchronized cardioversion
 - D. Vagal maneuvers

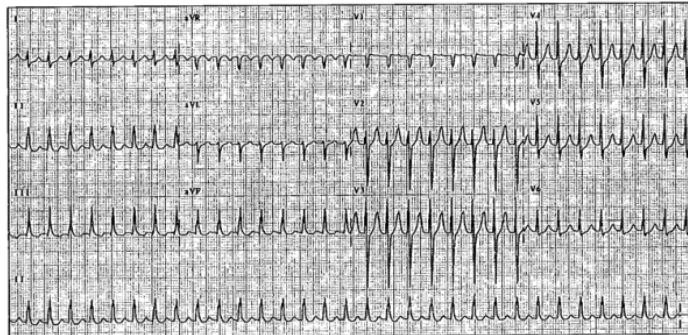


Figure 6

44. What is the most appropriate initial treatment for a patient with lung cancer who presents with a depressed mental status and a serum calcium concentration of 16 mg/dL?
- A. Furosemide
 - B. Hydrochlorothiazide
 - C. Hydrocortisone
 - D. Normal saline
45. A 4-year-old boy presents with a deep burn on his lower lip after his mother found him crying next to an electrical outlet. She says that the vacuum cleaner had been plugged in and there were obvious teeth marks on the cord. He had significant bleeding while at home that stopped after she held pressure on it for 15 minutes. What is the appropriate next step?
- A. Admit to a monitored bed for 12 to 24 hours
 - B. Discharge to home with outpatient plastic surgery consultation
 - C. Observe for 6 hours then discharge to home if condition does not deteriorate
 - D. Suture burn then discharge to home

46. A 56-year-old man with diabetes presents with a 3-week history of left ear pain, drainage, and headache. He has been using ear drops, but they have not been effective. Physical examination reveals weakness in the left facial muscles, including the forehead. What is the appropriate treatment?
 - A. Craniotomy and resection
 - B. Four-drug antitubercular therapy
 - C. Intravenous vancomycin
 - D. Oral fluoroquinolones
47. Which of the following presentations meets the criteria for systemic inflammatory response syndrome?
 - A. 18-year-old man in respiratory distress with blood pressure 120/80, pulse 100, temperature 37°C (98.6°F), and PaCO₂ 28 mm Hg
 - B. 35-year-old woman with blood pressure 150/90, pulse 110, temperature 37.5°C (99.5°F), and respirations 16
 - C. 50-year-old man with abdominal pain with blood pressure 160/100, pulse 90, and PaCO₂ 35 mm Hg, with laboratory test results indicating bacteremia of 8%
 - D. 68-year-old man with diabetes with blood pressure 90/50, pulse 85, temperature 39°C (102.2°F), and respirations 18
48. Which of the following physical examination findings is most consistent with bicipital tendinitis?
 - A. Extending the elbow against resistance worsens the pain, which radiates to the fingers
 - B. Externally rotating the arm 10 degrees localizes tenderness over the bicipital groove
 - C. Flexing the shoulder against resistance, with the elbow extended and forearm supinated, elicits posterior shoulder pain
 - D. Supinating the forearm against resistance, with the elbow flexed and the shoulder abducted, elicits pain and tenderness over the elbow
49. The most common form of migraine headache is:
 - A. Basilar-type migraine
 - B. Hemiplegic migraine
 - C. Migraine without aura
 - D. Ophthalmoplegic migraine

50. A 22-year-old woman presents with foul-smelling vaginal discharge of 3 days' duration. She denies any fever, chills, or abdominal pain and has no history of previous sexually transmitted disease. Pelvic examination reveals mild erythema to the vaginal walls with watery, foul-smelling discharge. Wet mount report shows 23 to 30 WBCs/hpf and clue cells. Pregnancy test result is negative. What is the most efficacious treatment choice?
- A. Azithromycin 1 g orally
 - B. Clotrimazole 1% vaginal cream at bedtime for 7 days
 - C. Estrogen 0.625 mg orally every day
 - D. Metronidazole 500 mg orally twice a day for 7 days
51. A 42-year-old woman presents with flulike symptoms, including nausea, vomiting, and abdominal cramping. She has a history of fibromyalgia, chronic back pain, and migraine headaches and frequently presents to the emergency department requesting narcotic pain medications. Her pain management physician is unavailable. On physical examination, she is tachycardic, mildly hypertensive, and mildly tachypneic. Which of the following statements regarding treatment for her condition is correct?
- A. Antiemetic agents and benzodiazepines are contraindicated because of their CNS effects
 - B. Clonidine can be administered by sustained-release patch for symptom relief
 - C. Naloxone can be administered intravenously to counteract overdose
 - D. The patient's level of discomfort represents a life-threatening condition and warrants inpatient treatment
52. What is the goal for urine output in the treatment of rhabdomyolysis with acute renal injury?
- A. 1 mL/kg/hr
 - B. 3 mL/kg/hr
 - C. 100 mL/hr
 - D. 400 mL/hr

53. An 85-year-old woman presents with a fever and cough that have lasted 2 days. She is a smoker and has a history of night sweats and weight loss, and she recently moved to the United States. There is no hemoptysis. A chest radiograph is obtained (Figure 7). Which of the following is the best option for management?
- A. Admit with tuberculosis isolation
 - B. Arrange a biopsy
 - C. Discharge on azithromycin
 - D. Schedule bronchoscopy

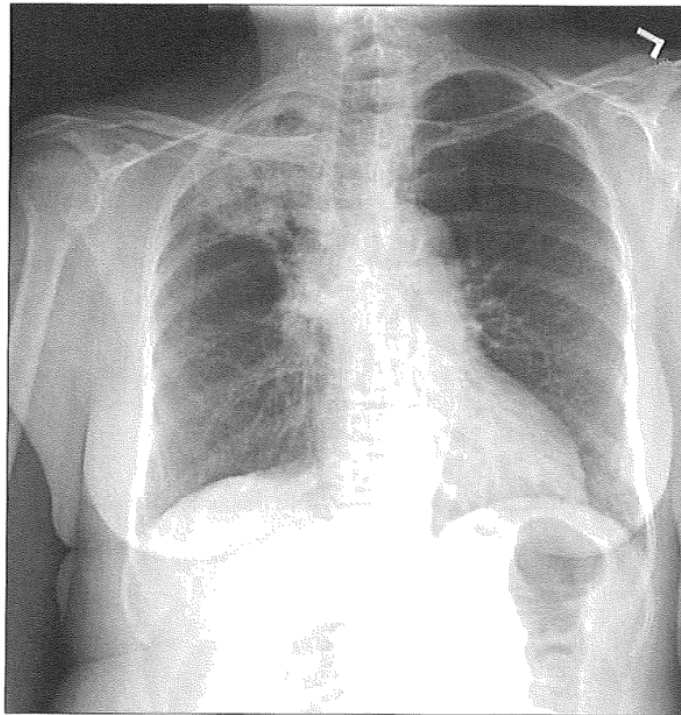


Figure 7

54. Which of the following poisoning – antidote therapeutic pairings is correct?
- A. Anticholinergic – atropine
 - B. Beta-blocker – octreotide
 - C. Calcium-channel blocker – insulin
 - D. Opioid – flumazenil

55. A 30-year-old woman who is 29 weeks' pregnant presents after she slipped on a patch of ice and fell on her front steps. She has had a normal pregnancy with no complications. She denies abdominal pain, vaginal discharge, and bleeding and can feel movement of the fetus. Vital signs include blood pressure 108/76 and pulse 88; fetal heart rate is 130. Physical examination reveals a small area of ecchymosis on the left side of the abdomen with no other abdominal or uterine tenderness. What is the appropriate management?
- A. Abdominal and fetal ultrasonography and discharge if negative
 - B. Admission and cardiotocographic monitoring for 24 hours
 - C. Discharge home with next-day followup with obstetrician
 - D. Observation and cardiotocographic monitoring for 6 hours
56. When performing an emergency department thoracotomy, after the incision has been made and the pleural cavity has been entered, in the presence of cardiac arrest and with no obvious injury on entry, what should be accomplished first?
- A. Begin direct cardiac compressions
 - B. Clamp the aorta
 - C. Open the pericardium
 - D. Pass a nasogastric tube to help distinguish the aorta from the esophagus
57. A 50-year-old man presents with nausea and vertigo. Vital signs are within normal limits. Physical examination reveals nystagmus but is otherwise normal. The pharmacologic agent most appropriate for treating these symptoms is:
- A. Haloperidol
 - B. Lorazepam
 - C. Meclizine
 - D. Ondansetron
58. A 57-year-old alcoholic man presents with hematemesis. He appears disheveled and intoxicated. Vital signs are blood pressure 80/40, pulse 130, respiratory rate 24, temperature 36.2°C (97.2°F), and oxygen saturation 97% on room air. Physical examination reveals tense ascites and scleral icterus. Pending definitive treatment, which of the following medications should be started intravenously in the emergency department?
- A. Cimetidine
 - B. Octreotide
 - C. Propranolol
 - D. Vitamin K

59. A 27-year-old woman with a rapid narrow-complex regular tachycardia continues to have palpitations after vagal maneuvers and adenosine 6 mg. Pulse is 180; other vital signs are normal. She is receiving 2 L oxygen by nasal cannula. What is the next appropriate intervention?
 - A. Adenosine 6 mg IV
 - B. Adenosine 12 mg IV
 - C. Metoprolol 5 mg IV
 - D. Synchronized cardioversion

60. A 45-year-old woman presents with severe sudden-onset pain in her left eye associated with nausea and cloudy vision. She describes seeing halos around lights. Physical examination reveals a red eye, a steamy cornea, and a midrange pupil. Which of the following is an expected finding during the ophthalmic examination?
 - A. Absence of cell or flare in the anterior chamber
 - B. Deep anterior chamber
 - C. Intraocular pressure greater than 21 mm Hg
 - D. Normal tonometry reading

61. A 24-year-old man presents with dysuria and penile discharge. He is sexually active. Which of the following is the current recommended therapy for his condition?
 - A. Azithromycin 1,000 mg orally
 - B. Cefixime 400 mg and azithromycin 1,000 mg orally
 - C. Ceftriaxone 1 g IM
 - D. Levofloxacin 500 mg and azithromycin 1,000 mg orally

62. The most common type of primary headache is:
 - A. Cluster headache
 - B. Migraine headache
 - C. Tension headache
 - D. Trigeminal neuralgia

63. A 26-year-old woman who is 6 months' pregnant presents with diffuse abdominal pain and mild vaginal bleeding of 2 days' duration. She says that she is lightheaded and fatigued; she reports decreased fetal movement but no chest pain or shortness of breath. Vital signs reveal hypotension and tachycardia. What diagnosis should be considered in the workup?
- A. Early labor
 - B. Placental abruption
 - C. Pre-eclampsia
 - D. Urinary tract infection
64. A 35-year-old man presents with pleuritic chest pain and shortness of breath. He says that the symptoms started suddenly the night before. Vital signs include blood pressure 130/74, pulse 85, respirations 18, and oxygen saturation 97% on room air. A chest radiograph is obtained (Figure 8). What is the most appropriate treatment option?
- A. Needle decompression
 - B. Oxygen and 24-hour hospitalization
 - C. Repeat chest radiography in 6 hours
 - D. Tube thoracostomy

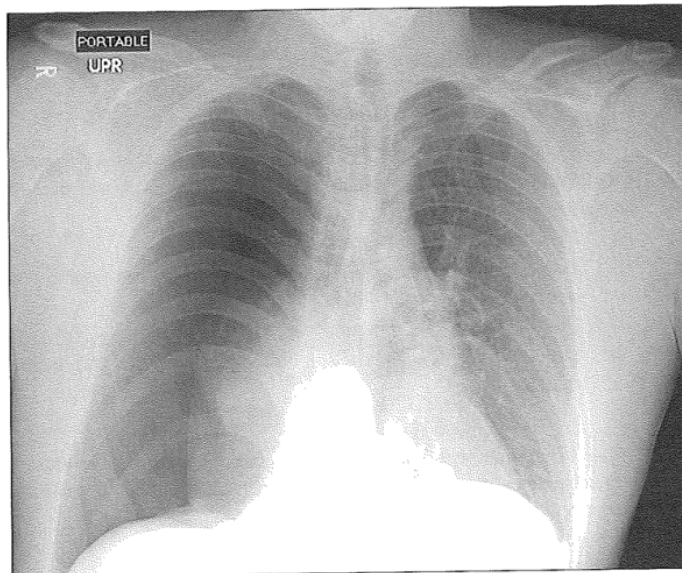


Figure 8

65. In a patient who intentionally overdosed on paroxetine 6 hours earlier but has remained asymptomatic, with normal vital signs and a normal physical examination, which of the following test results is needed to guide management?
- A. Serum acetaminophen concentration
 - B. Serum ethanol concentration
 - C. Urine drugs of abuse screen
 - D. Urine tricyclic antidepressant screen
66. Which of the following structures is most commonly injured as a result of primary blast injury?
- A. Brain
 - B. Lung
 - C. Small bowel
 - D. Tympanic membrane
67. Which of the following is the preferred site for emergent intraosseous needle placement in a 6-month-old child?
- A. Distal femur
 - B. Humerus
 - C. Proximal tibia
 - D. Sternum
68. When assessing brainstem function in an unconscious patient using the oculovestibular response, which of the following indicates an intact cortical response?
- A. Eyes deviate away from stimulus
 - B. Eyes deviate away from stimulus, followed by nystagmus and return to midline
 - C. Eyes deviate toward stimulus
 - D. Eyes deviate toward stimulus, followed by nystagmus and return to midline
69. After a thorough history and physical examination, what is the most appropriate emergency department management for uncomplicated diverticulitis in a middle-aged patient?
- A. Abdominal and pelvic CT scanning
 - B. Lower gastrointestinal barium contrast study
 - C. Oral antibiotics
 - D. Parenteral antibiotics

70. Endocarditis prophylaxis is recommended for which of the following patients?
- A. 20-year-old woman with atrial septal defect repair 1 week earlier who now needs emergent endoscopy for hematemesis
 - B. 40-year-old man with hypertrophic obstructive cardiomyopathy referred for extraction of impacted wisdom teeth
 - C. 60-year-old man with prior endocarditis who requires bladder catheterization for urinary retention without findings of infection
 - D. 60-year-old woman with aortic valve replacement who fell and has an avulsed tooth and mucosal lacerations
71. A patient with a long history of COPD presents with shortness of breath. He is in severe respiratory distress. Vital signs include pulse 124, respirations 32, temperature 37°C (98.6°F), and oxygen saturation 91%. Examination reveals diffuse wheezes and intercostal retractions; ABG analysis results are: pH, 7.3; PaO₂, 60; PaCO₂, 65; and bicarbonate, 30 mEq/L. He is receiving nebulized albuterol. What is the next step in management?
- A. Administer antibiotics
 - B. Begin noninvasive ventilation
 - C. Check D-dimer level
 - D. Switch the nebulizer from oxygen to room air

72. A 48-year-old woman presents after falling off a stepstool. She cannot bear weight on her left leg. Radiographs are obtained (Figure 9). She is neurovascularly intact; the extremity is immobilized in a splint, and the pain is controlled with morphine. While waiting to be admitted, she develops severe pain in her foot with paresthesias. The foot is cool to touch but has intact pulses and capillary refill. Motor and sensory examinations are normal. Removal of the splint does not alleviate her discomfort. What is the appropriate next step?
- A. Angiography
 - B. Measurement of compartment pressures
 - C. Placement of a cast
 - D. Ultrasonography

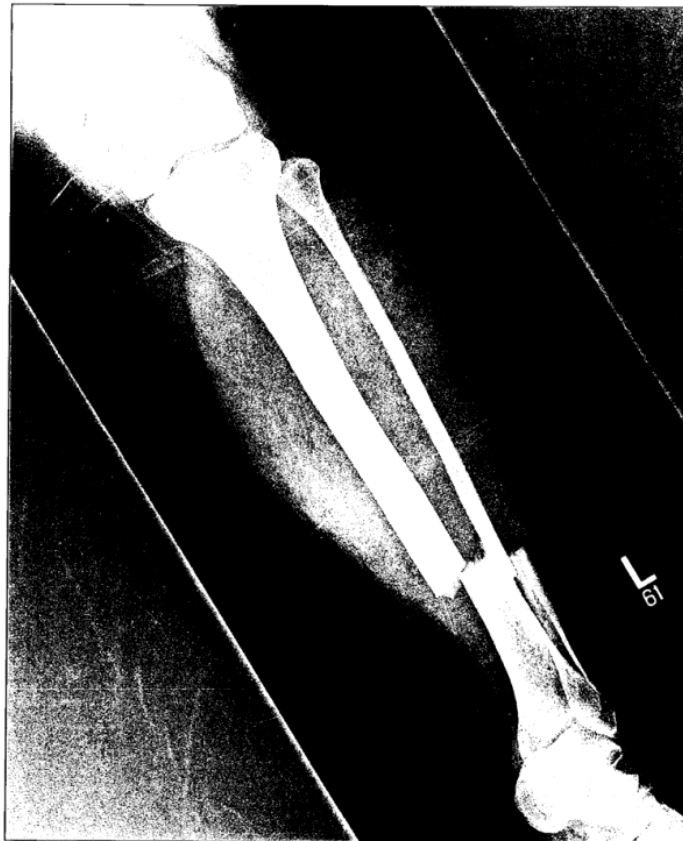


Figure 9

73. A 42-year-old man presents after a motor vehicle crash in which he was the unrestrained driver. He has shortness of breath and pain and crepitance on the right side of his chest. In the ambulance, he became tachycardic, tachypneic, and hypotensive. Symmetrical breath sounds are noted. What is the appropriate next step?
- A. Order chest radiography
 - B. Perform needle decompression of the chest
 - C. Set up for a tube thoracostomy
 - D. Start normal saline 1 L bolus IV
74. In the assessment of health care personnel for HIV postexposure prophylaxis following a percutaneous injury, a less severe exposure type is associated with:
- A. Deep puncture
 - B. Needle used in an artery or vein
 - C. Solid needle
 - D. Visible blood on device
75. A 11-month-old boy is brought in by his mother after she noticed a large amount of dark red blood in his diaper. He appears well and has normal vital signs and a benign abdominal examination. Rectal examination is remarkable for blood without an obvious source. Which of the following is needed to confirm the suspected diagnosis?
- A. Abdominal ultrasound examination
 - B. Additional history on diet
 - C. Apt test
 - D. Nuclear medicine scan
76. Which of the following is a common contributing factor in the development of mesenteric ischemia?
- A. Atrial fibrillation
 - B. *Campylobacter jejuni* infection
 - C. Celiac disease
 - D. von Willebrand disease

77. A 25-year-old man presents with an asthma exacerbation. Over several hours, he is given oral steroids and nebulized albuterol and ipratropium bromide treatments. Vital signs include pulse 105, respirations 20, and oxygen saturation 95%; PEF is 250 L/min. He is able to speak in full sentences but is still wheezing. What should be the next step in his treatment?
 - A. Administer subcutaneous terbutaline and admit to the ICU
 - B. Continue albuterol and consider admission
 - C. Discharge on albuterol and steroids
 - D. Initiate heliox
78. A 27-year-old man presents with severe left knee pain after a low-speed motorcycle crash. Physical examination is limited and reveals only swelling and tenderness. Radiographs reveal dislocation of the knee. Which of the following findings is most concerning for concomitant popliteal artery injury?
 - A. Ankle-brachial index of 0.93
 - B. Intact dorsalis pedis pulse
 - C. Joint effusion
 - D. Posterior dislocation
79. A 15-year-old girl presents with a sore throat and fever. Physical examination reveals tender anterior cervical adenopathy. She has not had a cough. Which of the following additional findings helps confirm the diagnosis of group A beta-hemolytic *Streptococcus* infection?
 - A. Displaced uvula
 - B. Muffled voice
 - C. Palatal petechiae
 - D. Tender hyoid
80. A 24-year-old man with a history of ulcerative colitis and previous appendectomy presents with a 3-day history of progressively worsening fever, vomiting, and abdominal pain. He says he has had several episodes of bloody diarrhea over the past 10 days. Blood pressure is 100/70, pulse is 115, and temperature is 38.4°C (101.1°F). He appears ill and dehydrated, with a distended abdomen and stool mixed with blood. Abdominal radiography reveals a transverse colon diameter of 8 cm with air seen within the rectum. What is the appropriate next step in management?
 - A. Give parenteral steroids
 - B. Order a barium enema
 - C. Place a rectal tube
 - D. Start oral vancomycin

81. What is the effect of placing a magnet over a permanent cardiac pacemaker?
- A. All pacemaker impulses are temporarily disabled
 - B. Pacemaker is set to fixed-rate mode
 - C. Pacemaker is set to interrogation mode
 - D. Pacemaker is set to overdrive pacing mode
82. A 62-year-old man with a long smoking history presents coughing up large amounts of blood. He says that it started as flecks of blood in his sputum several weeks earlier. He began coughing clumps of blood earlier in the day and has since filled a coffee cup. Vital signs are blood pressure 180/94, pulse 130, respirations 18, temperature 36.9°C (98.4°F), and oxygen saturation 92% on room air. He has decreased breath sounds. A chest radiograph reveals a right upper lobe mass; Hct is 31%. He coughs up about 5 mL of blood every 15 to 20 minutes. What should be the next step in management?
- A. Arrange outpatient chest CT scanning and followup with oncology
 - B. Intubate left mainstem and obtain thoracic surgery consultation for emergent thoracotomy
 - C. Obtain pulmonology or thoracic surgery consultation for bronchoscopy
 - D. Start transfusion and arrange ICU admission
83. A 17-year-old boy presents with severe pain in his left eye after being hit by a hockey puck the night before. Physical examination reveals periorbital ecchymosis, intact extraocular movements, and no orbital tenderness. Ophthalmoscopic examination of the disc is normal. The left pupil is sluggish. He has decreased visual acuity in the left eye, injection of the left limbus, and photophobia when light is shined into the right eye. What is the most likely diagnosis?
- A. Endophthalmitis
 - B. Hyphema
 - C. Scleritis
 - D. Traumatic iritis
84. A 46-year-old man presents with dense right hemiparesis, right hemisensory loss, and global aphasia of 20 minutes' duration. He is looking to the left. Where is the lesion located?
- A. Anterior cerebral artery
 - B. Basilar artery
 - C. Middle cerebral artery
 - D. Posterior cerebral artery

85. A 40-year-old woman presents with fever, right upper quadrant pain, jaundice, hypotension, and altered mental status. Laboratory tests reveal elevated WBCs, bilirubin, and alkaline phosphatase levels; lipase level is normal. Ultrasound examination demonstrates cholelithiasis with a 10-mm common bile duct. What is the appropriate next step in management?
- CT scanning
 - Emergency surgery
 - Endoscopic retrograde cholangiopancreatography
 - Hepatobiliary imino-diacetic acid scan
86. An 80-year-old man presents after experiencing syncope while painting his house. He has a pacemaker. An ECG is obtained (Figure 10). Which of the following statements regarding his condition is correct?
- ECG reveals a pacemaker-mediated tachycardia that can be terminated by placement of a magnet
 - ECG reveals pacemaker failure to capture
 - Pacemaker oversensing is the most likely cause
 - Placement of a magnet would clarify whether the pacemaker is undersensing

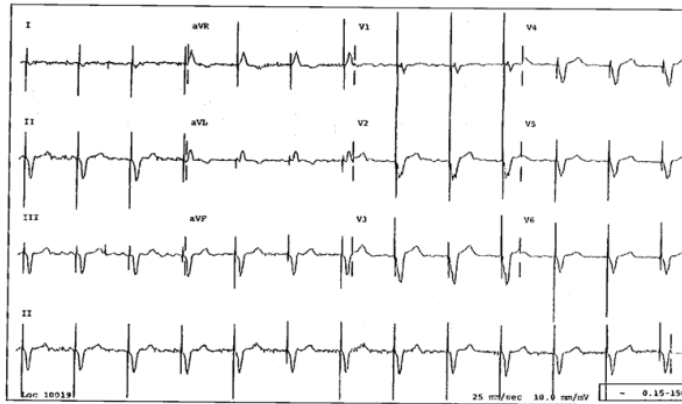


Figure 10

87. A 20-year-old man presents with left knee pain after falling. Radiographs are obtained (Figure 11). Which of the following findings associated with this injury mandates emergent orthopedic consultation in the emergency department?
- A. Hemarthrosis
 - B. Inability to bear weight
 - C. Inability to extend the knee
 - D. Inability to fully flex the knee

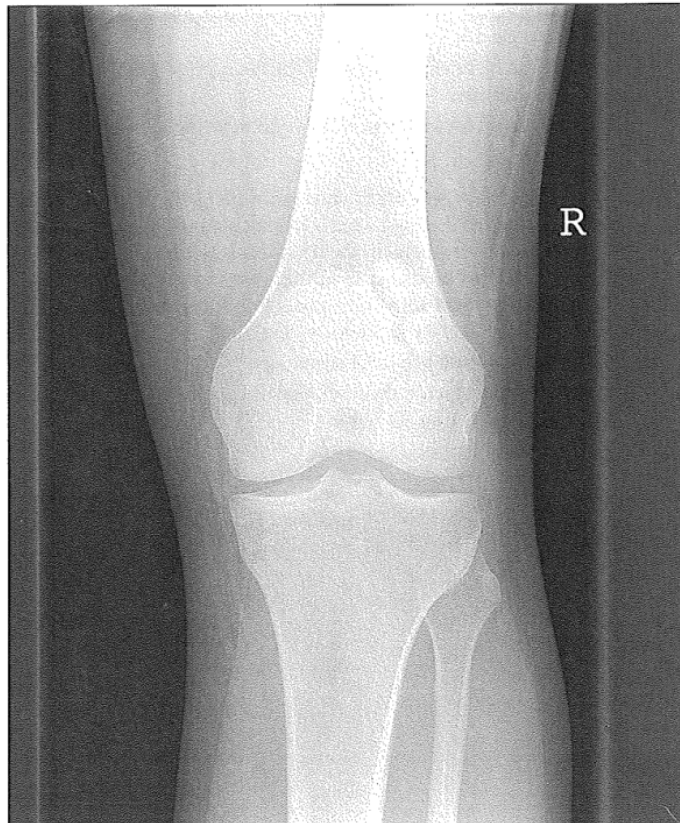


Figure 11

88. A 58-year-old woman presents with shortness of breath and chest discomfort that began 1 hour earlier while she was working in her yard. She denies other associated symptoms and is currently asymptomatic. Vital signs include blood pressure 115/85, pulse 79, respirations 16, and oxygen saturation 99% on room air. Physical examination and ECG findings are normal. Her troponin level is below the lower limit of detection. Which of the following statements about risk stratifying this patient is correct?
- A. If a GI cocktail relieves her discomfort, she likely has a noncardiac condition
 - B. If sublingual nitroglycerin relieves her discomfort, she likely has cardiac ischemia
 - C. She can be safely discharged if she has no risk factors for coronary artery disease
 - D. She should undergo repeat ECG and biomarker testing
89. A 21-year-old man presents by ambulance after being assaulted with a steak knife. He received 2 L crystalloid solution en route. Physical examination reveals a 2-cm stab wound in the left upper quadrant that is not bleeding. There are no other injuries, and mental status is normal. Blood pressure is 70/40 with a pulse of 150. Abdominal ultrasonography is performed (Figure 12). What is the appropriate next step?
- A. Abdominal and pelvic CT scanning
 - B. Additional 2 L crystalloid solution
 - C. Diagnostic peritoneal lavage
 - D. Exploratory laparotomy

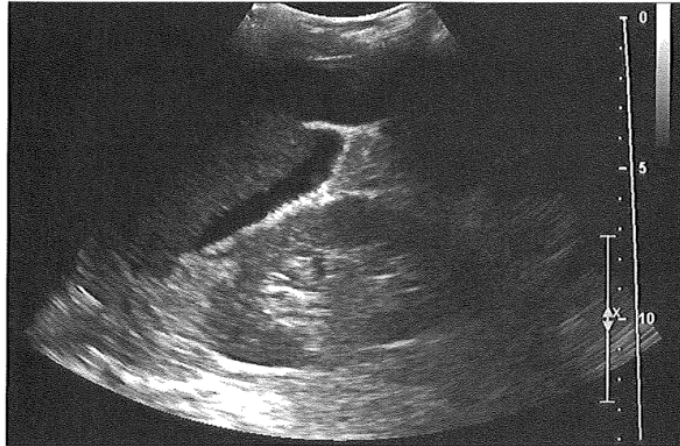


Figure 12

90. A 19-year-old woman presents with elbow pain after falling down steps onto her outstretched right hand. Radiographs are obtained (Figure 13). Which of the following is indicated for management of her injury?
- A. CT scanning
 - B. Orthopedic consultation in the emergency department
 - C. Splinting followed by casting for 6 weeks
 - D. Splinting or placing the arm in a sling with early range of motion



Figure 13

91. In a patient who presents with diplopia, unilateral ptosis, inability to adduct, depress, or elevate the eye, and intact pupillary responses to light and accommodation, the most likely diagnosis is:
- A. Botulism
 - B. Diabetic mononeuropathy
 - C. Myasthenia gravis
 - D. Thyroid ophthalmopathy
92. A 42-year-old man presents with intermittent painful rectal bleeding over the past 4 days. Which of the following physical examination findings should prompt further workup for underlying disease?
- A. Firm external hemorrhoid with bluish discoloration
 - B. Internal hemorrhoids requiring manual reduction
 - C. Left lateral anal fissure
 - D. Posterior midline anal fissure

93. In which of the following arrhythmias is immediate synchronized cardioversion indicated?
- A. Accelerated idioventricular rhythm after reperfusion
 - B. Multifocal atrial tachycardia
 - C. Unstable atrial fibrillation
 - D. Ventricular fibrillation
94. Which of the following agents in overdose most closely mimics opioid poisoning?
- A. Clonidine
 - B. Diphenhydramine
 - C. LSD
 - D. Yohimbine
95. Which of the following statements regarding the consequences of crowding and boarding patients in the emergency department is correct?
- A. Boarding does not affect total length of stay
 - B. Boarding increases left-without-being-seen rates
 - C. Crowding does not affect ambulance diversion rates
 - D. Crowding does not affect waiting time for higher-acuity patients

96. A mother brings in her 4-month-old son because he hurt his arm after rolling off a bed. He is awake and alert and appears uncomfortable when the arm is moved. Physical examination is otherwise normal; there are no other signs of injury. A radiograph is obtained (Figure 14). Appropriate management includes immobilization of the arm, referral to a pediatric orthopedist, and:
- A. Admission for fracture care
 - B. Further questioning of the mother to determine the cause of injury
 - C. Head CT
 - D. Reporting of suspected abuse



Figure 14

97. A 3-year-old boy with fever is brought in by his parents. He has no clear localizing signs of fever except for a mildly red ear. The parents ask for a prescription just in case. Which of the following additional findings contraindicates such a wait-and-see approach?
- A. He appears nontoxic
 - B. He has a known inherited immunodeficiency
 - C. He has an allergy to penicillin
 - D. He was treated with antibiotics for otitis media 2 months earlier

98. A 33-year-old Asian woman presents with fatigue and shortness of breath. She recently started taking nitrofurantoin for a urinary tract infection. Laboratory testing reveals profound microcytic, hypochromic anemia. On further questioning, she says she has always had severe anemia. Which of the following is the most likely diagnosis?
 - A. G6PD deficiency
 - B. Iron deficiency
 - C. Sickle cell disease
 - D. Thalassemia

99. A 35-year-old woman with known myasthenia gravis presents with a fever and right lower quadrant pain. Abdominal CT scanning reveals acute appendicitis. While in the emergency department, she begins to complain of increasing shortness of breath. Vital signs remain stable. What is the appropriate next step?
 - A. Administer pyridostigmine
 - B. Measure forced vital capacity
 - C. Perform emergent intubation
 - D. Perform the ice bag test

100. Which of the following statements regarding urinary tract infections in pediatric patients is correct?
 - A. Pathogens vary with patient age
 - B. Presence of fever does not change the significance of the illness
 - C. Urinary frequency and dysuria are the typical complaints
 - D. Urinary tract infections are rare in the pediatric population

101. Which of the following statements regarding the use of procedural sedation agents is correct?
 - A. Hypertension is a common side effect of the rapid administration of sedative agents
 - B. Propofol is generally considered unsafe for use in the emergency department
 - C. Using two drugs increases the risk of side effects that are seen with each drug individually
 - D. When both a benzodiazepine and a narcotic agent are used, the benzodiazepine should be given first and the opioid dose titrated

102. Which of the following medications is most effective in the treatment of an acute asthma exacerbation?
 - A. Inhaled steroids
 - B. Intravenous ketamine
 - C. Intravenous magnesium
 - D. Nebulized albuterol

103. A 6-year-old boy is brought in by his father 1 hour after sustaining a head injury. He was riding his bicycle down a hill and fell off after it struck a branch; he was not wearing a helmet. Medical history is significant for hemophilia A. Which of the following is the first step in management?
 - A. Blood transfusion using O-negative whole blood
 - B. CT
 - C. Factor VIII therapy to 100% activity
 - D. Factor IX therapy to 50% activity

104. A 32-year-old man presents by ambulance after a motor vehicle crash. He was hypotensive in the field and responded to administration of 2 L crystalloid solution. Vital signs include blood pressure 118/80, pulse 95, and respirations 20. He has ecchymosis over his upper abdomen, which is tender to palpation. Which of the following statements regarding CT scanning in this situation is correct?
 - A. It is extremely sensitive for diagnosing hollow viscus injury
 - B. It is superior to ultrasonography for diagnosing solid organ injury
 - C. Oral contrast is not helpful for evaluating the abdominal trauma
 - D. Ultrasonography is superior for diagnosing hemoperitoneum

105. Which of the following clinical features is associated with vasovagal or neurocardiogenic syncope?
 - A. Absent prodrome
 - B. Confusion
 - C. Nausea
 - D. Orthostatic hypotension

106. A 55-year-old man with a history of severe osteoarthritis presents with joint pain of several months' duration despite taking several over-the-counter and prescription pain relievers. He also reports worsening abdominal pain for the past month. On examination, the patient is icteric and has right upper quadrant tenderness. Which of the following is most important in determining appropriate treatment?
- A. Abdominal CT scanning
 - B. Alkaline phosphatase and gamma-glutamyltransferase level testing
 - C. AST and acetaminophen level testing
 - D. Right upper quadrant ultrasonography
107. A 42-year-old woman presents with progressive shortness of breath of 5 days' duration. She has a history of chronic renal failure and is on hemodialysis. Vital signs include blood pressure 95/50, pulse 110, respirations 24, and oxygen saturation 95% on room air. An ECG is obtained (Figure 15). While waiting for chest radiography, she becomes increasingly pale and dusky, and her systolic pressure progressively decreases to 70 mm Hg with only transient response to intravenous fluid resuscitation. What is the most effective definitive treatment?
- A. Calcium gluconate, sodium bicarbonate, insulin, and glucose
 - B. Dobutamine
 - C. Pericardiocentesis
 - D. Thrombolytic therapy



Figure 15

108. Which of the following tests is the most specific for making the diagnosis of alcoholic ketoacidosis?
 - A. Beta-hydroxybutyrate
 - B. Formic acid
 - C. Lactate
 - D. Oxalic acid

109. An 11-month-old boy presents 3 hours after falling off a 4-foot-high step and landing directly on his head on the sidewalk. He is awake and alert on examination with age-appropriate vital signs. There is a 4-cm boggy hematoma overlying the site of impact. Which bone is most likely to be fractured?
 - A. Frontal
 - B. Parietal
 - C. Temporal
 - D. Zygomatic

110. A 50-year-old man presents by ambulance after paramedics found him stumbling around in a park and disoriented on a very hot summer day. He is mumbling and not responding to questions appropriately. His skin is dry and hot to the touch; rectal temperature is 41°C (105.8°F). Normal saline has been started intravenously. What is the next most effective immediate treatment for cooling?
 - A. Acetaminophen administered rectally
 - B. Cardiopulmonary bypass with a heat exchanger
 - C. Cooling with fans and skin wetting from a spray bottle
 - D. Ice packs placed on the axillae and groin

111. A patient has the following results from a hepatitis serology panel: HbsAg, negative; anti-HBs, positive; anti-HBc, positive; anti-HCV, negative. Based on these results, what can be inferred about his viral hepatitis status?
 - A. He has been exposed to hepatitis B
 - B. He has been vaccinated against hepatitis B
 - C. He has chronically active hepatitis B
 - D. He has chronically active hepatitis C

112. Which of the following is the most common single organ system injury associated with death in children?
 - A. Abdominal injury
 - B. Cervical injury
 - C. Head injury
 - D. Thoracic injury

113. A 32-year-old man presents with muscle weakness and dark-colored urine since completing a marathon race the day before. Which of the following additional findings would suggest that he has an acute renal injury?
 - A. Elevated serum creatine kinase
 - B. Hyperkalemia
 - C. Pigmented granular casts in urine
 - D. Rapid increase in serum creatinine

114. Which of the following cardinal signs is most likely to be present in early flexor tenosynovitis?
 - A. Flexed position of the finger at rest
 - B. Pain on passive extension of the finger
 - C. Symmetric swelling of the finger
 - D. Tenderness over the course of the flexor sheath

115. A 35-year-old man presents with a history classic for ureteral colic. He says that he has undergone appendectomy, cholecystectomy, and exploratory laparotomy, as well as cardiac catheterization, but he is unclear about whether he has coronary artery disease. Each of these procedures, he says, was performed in a different city. When the nurse returns to the room, she finds him sticking a needle in his finger over the urine collection cup. What is the most likely diagnosis?
 - A. Conversion disorder
 - B. Drug-seeking behavior
 - C. Malingering
 - D. Munchausen syndrome

116. A mother brings in her 5-day-old son because she is concerned about his color. She says he has not fed well for the past 24 hours and always seems to be breathing hard. Vital signs are blood pressure 73/44, pulse 120, respirations 65, and temperature 37.2°C (99°F). Physical examination reveals perioral cyanosis and duskiness of the face and trunk. Immediate management includes:
- A. 100% oxygen by nonrebreather mask
 - B. Isotonic crystalloid fluid 20 mL/kg
 - C. Phenylephrine 5 mcg/kg IV bolus
 - D. Synchronized cardioversion at 0.5 to 1 J/kg
117. End-tidal carbon dioxide monitoring is:
- A. A poor predictor of correct endotracheal tube placement
 - B. An early indicator of carbon dioxide when the colorimetric sensor turns purple
 - C. An early indicator of respiratory depression during procedural sedation
 - D. Less accurate when used during CPR
118. A 28-year-old man presents after being hit in the right flank with a baseball bat. Blood pressure is 120/80 with pulse 80 and respirations 15. Bedside ultrasonography is performed (Figure 16). Urinalysis reveals 5 RBCs/hpf on microscopic examination. Which of the following additional findings would prompt further workup of renal injury?
- A. Flank pain
 - B. Hemodynamic instability
 - C. History of urinary tract infection in the past
 - D. Trace protein on urine dipstick



Figure 16

119. Visceral abdominal pain is:
 - A. Intense and constant
 - B. Midline and bilateral
 - C. Sharp and well localized
 - D. Transmitted by somatic neurons
120. A 57-year-old man with a history of cirrhosis presents with acute renal failure. He denies recent illness and is not taking any nephrotoxic medications. He is well hydrated; his urinalysis is negative. Which of the following is the definitive treatment?
 - A. Hydration
 - B. Liver transplant
 - C. Renal transplant
 - D. Transjugular intrahepatic portosystemic shunt
121. A 60-year-old man with hypertension and diabetes mellitus Type 2 presents with stuttering chest pain and shortness of breath of several hours' duration. On examination, he appears diaphoretic. Vital signs are blood pressure 80/50, pulse 110, respirations 20, and oxygen saturation 94% on room air. An ECG is obtained (Figure 17). Which of the following is the appropriate definitive therapy?
 - A. I-L normal saline bolus
 - B. Dopamine drip
 - C. Primary angioplasty
 - D. Thrombolytic therapy

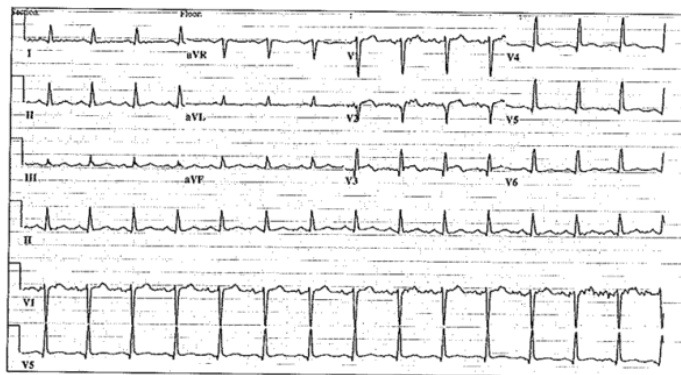


Figure 17

122. A 14-year-old boy presents with pain in his right eye that started while he was mowing the lawn. On initial examination, visual acuity is 20/20 in the normal eye and 20/25 in the affected eye. The cornea is injected, but there is no foreign body visualized; no corneal abrasion is detected using fluorescein staining. Which of the following is the most important evaluation if foreign body is suspected?
- A. Dilated ophthalmic examination
 - B. Eversion of the lids
 - C. Seidel test
 - D. Slit lamp microscopy
123. Which of the following best describes a positive Nikolsky sign?
- A. Blanching of an erythematous rash from pressure
 - B. Punctate bleeding of a scaly lesion that has been scratched
 - C. Separation of the epidermis from dermis from a lateral, shearing pressure with a finger
 - D. Wheal reaction after the skin is scratched
124. An 8-year-old girl presents after falling onto her thumb during a sack race. A radiograph is obtained (Figure 18). What type of fracture does she have?
- A. Salter-Harris I
 - B. Salter-Harris II
 - C. Salter-Harris III
 - D. Salter-Harris IV



Figure 18

125. A 21-year-old woman presents with new-onset dyspnea and pleuritic chest pain that is worse when she lies down. She denies trauma and medication use. She says that she had fever and joint pain a day or two earlier but is otherwise healthy. Ultrasonography reveals a small pericardial effusion without tamponade. Initial laboratory test results include a negative urine hCG, proteinuria on urinalysis; Hgb, 9 g/dL; and platelets 75,000/mcL. What is the most likely cause of this presentation?
 - A. Hemolytic uremic syndrome
 - B. *Mycoplasma pneumoniae* infection
 - C. Rheumatoid arthritis
 - D. Systemic lupus erythematosus
126. Which of the following statements regarding tympanic membrane perforations is correct?
 - A. All patients with tympanic membrane perforations should be treated prophylactically with topical antibiotics
 - B. Perforations caused by penetrating trauma can disrupt the middle ear bones and result in hearing loss
 - C. Tinnitus or vertigo following perforations by noise trauma is usually permanent
 - D. Tympanic membrane perforations rarely close spontaneously
127. A 30-year-old woman who is 7 months' pregnant presents with right leg pain and swelling of 4 days' duration. Which of the following studies should be used to evaluate the iliac veins in the right leg for suspected deep vein thrombosis?
 - A. Compression ultrasonography
 - B. CT
 - C. D-dimer assay
 - D. MRI
128. A 65-year-old man with lung cancer presents with pain in his low thoracic spine of 2 weeks' duration, as well as tingling in his legs. Examination reveals a thin man with grade 2/5 motor strength in his bilateral lower extremities and decreased sensation starting at the T10 level. Which of the following statements characterizes this patient's condition?
 - A. Only 25% of patients have motor weakness at the time of diagnosis
 - B. Reflexes below the affected level are usually preserved as the disease progresses
 - C. Symptoms are often made worse by coughing or sneezing
 - D. The lumbar spine is the most commonly affected site

129. A slit lamp examination with fluorescein stain is performed on a patient with an acutely red and painful eye. What does the finding in Figure 19 suggest as the cause of the patient's symptoms?
- A. Acute angle closure glaucoma
 - B. Anterior uveitis
 - C. Gonococcal conjunctivitis
 - D. Herpes simplex virus infection

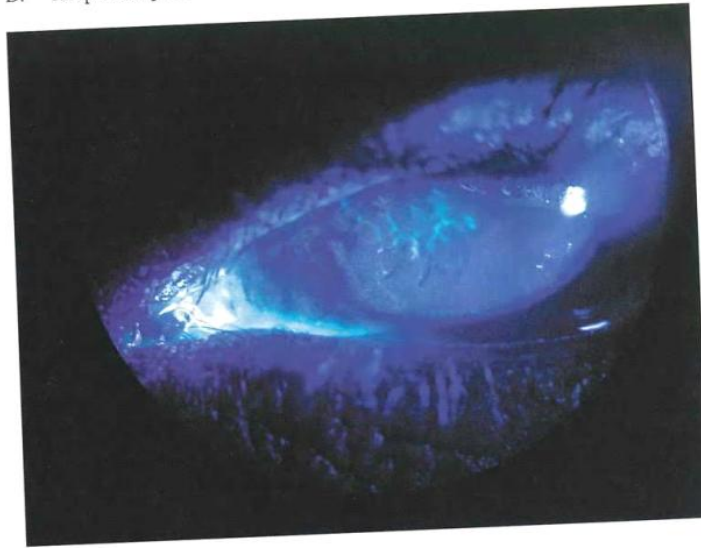


Figure 19

130. In a patient with a new pleural effusion, which of the following laboratory findings suggests that it is an exudate?
- A. pH level less than 7.1
 - B. Pleural fluid LDH level less than 200 units/L
 - C. Pleural fluid LDH level-to-serum LDH level ratio less than 0.6
 - D. Pleural fluid protein level-to-serum protein level ratio greater than 0.5

131. An 80-year-old woman presents by ambulance after falling at her nursing home. She has ecchymosis over her left temporal region but is alert and oriented. She has no other injuries, and the neurologic examination is normal. Which of the following factors increased her risk for the condition revealed in Figure 20?
- A. Advanced age
 - B. Injury to the middle meningeal artery
 - C. Ruptured aneurysm
 - D. Severe hypertension

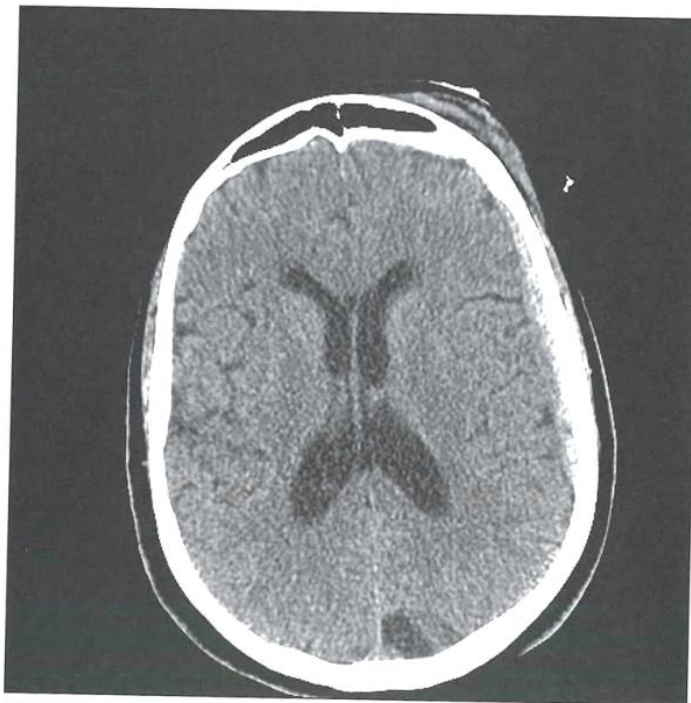


Figure 20

132. A 5-month-old girl presents by ambulance after a seizure. The mother says her daughter has never had a seizure before, and that she had been well until that morning when she developed a small cough and a runny nose. She describes the seizure as a shaking and tensing of her entire body, with her eyes rolling up into her head, that lasted about 10 minutes. On examination, the patient is healthy appearing and progressively improving to baseline without a focus of illness. Vital signs are blood pressure 75/40, pulse 120, respirations 40, and temperature 40°C (104°F). Which of the following elements of her history supports the diagnosis of complex febrile seizure as opposed to simple febrile seizure?
- A. Age
 - B. Length of seizure
 - C. Number of previous seizures
 - D. Temperature
133. Which of the following is an early sign of superior vena cava syndrome?
- A. Cyanosis
 - B. Facial plethora
 - C. Facial swelling
 - D. Upper extremity edema
134. A 40-year-old man from Arizona presents with right upper quadrant abdominal pain and a cough with thick, dark sputum. Ultrasonography demonstrates a large right-sided pleural effusion as well as a 7-cm hypoechoic liver lesion with thick irregular walls. What is the most appropriate treatment?
- A. Ampicillin 2 g IV and gentamicin 2 mg/kg IV
 - B. Levofloxacin 750 mg IV
 - C. Metronidazole 750 mg IV
 - D. Paromomycin 500 mg orally

135. A 70-year-old woman presents with sudden-onset left lower extremity pain and swelling that have progressively worsened over the past 2 hours. She has no history of leg pain. Examination reveals blotchy, mottled areas of cyanosis of the toes on her left foot. The left lower leg is cool and tender on examination, and pedal pulses are not palpable and faintly detectable by Doppler. Vital signs are blood pressure 140/90, pulse 100, respirations 20, temperature 37.5°C (99.5°F), and oxygen saturation 98% on room air. An ECG reveals atrial fibrillation without evidence of ischemia. After determining the ankle-brachial index, what is the appropriate next step?
 - A. Order CT angiography and obtain a vascular surgery consultation
 - B. Order CT angiography of the left leg and start fibrinolytic therapy
 - C. Start a beta-blocker and obtain a vascular surgery consultation
 - D. Start anticoagulation and a beta-blocker
136. A patient presents to the emergency department with signs and symptoms consistent with thyroid storm. The emergency physician makes the correct diagnosis but does not correctly recall the recommended medications in the correct order. Which of the following types of error best defines this situation?
 - A. Anchoring
 - B. Lapse
 - C. Mistake
 - D. System based
137. Which of the following forms of hepatitis is transmitted by the fecal-oral route?
 - A. Autoimmune hepatitis
 - B. Hepatitis C
 - C. Hepatitis delta virus
 - D. Hepatitis E
138. What is the appropriate intervention for itching associated with a blood transfusion?
 - A. Acetaminophen
 - B. Acute hemolytic workup
 - C. Diphenhydramine
 - D. Observation

139. A 3-week-old boy presents by ambulance with central cyanosis, with an oxygen mask in place and intravenous access established in the right antecubital fossa. The babysitter had called 911 and said that he turned blue. On physical examination, he is awake and alert but still cyanotic. What is the most appropriate initial step in the management of this patient?
- A. Intravenous hydration with 20 mL/kg of D5W
 - B. Knee-to-chest positioning
 - C. Phenylephrine 5 mcg/kg IV bolus
 - D. Vagal maneuvers, including rectal stimulation
140. Which of the following is the most frequently documented pathogen in acute monoarticular septic arthritis?
- A. *Escherichia coli*
 - B. *Haemophilus* species
 - C. *Neisseria gonorrhoeae*
 - D. *Staphylococcus aureus*
141. In a patient who exhibits a change in mental status and a normal ability to function, which of the following symptoms by itself most favors a diagnosis of dementia rather than delirium?
- A. Disturbance of consciousness
 - B. Impaired ability to learn new information
 - C. Rapid, abrupt onset over hours or days
 - D. Tachycardia and fever
142. A 65-year-old man presents with severe respiratory distress and a history of both COPD and heart failure. Blood pressure is 195/115, and respirations are 32. Which of the following additional findings would support the decision to use BiPAP?
- A. Altered level of consciousness
 - B. ECG evidence of acute MI
 - C. Elements of both heart failure and COPD
 - D. pH level of 7

143. A 72-year-old woman presents with left hip pain after falling on an icy sidewalk. Radiographs are obtained (Figure 21). The orthopedics consultant wants to discharge her because she is not a candidate for surgery. Which of the following options for her management is acceptable?
- A. Discharge home with crutches and analgesia and instructions to bear weight as tolerated
 - B. Insist that an orthopedic surgeon admit her for surgical repair
 - C. Order additional diagnostic imaging
 - D. Request an interventional radiology consultation for angiography



Figure 21

144. The Dix-Hallpike test is useful in the evaluation of which of the following presentations of vertigo?
- A. Benign paroxysmal positional vertigo
 - B. Labyrinthitis
 - C. Ménière disease
 - D. Vertebrobasilar insufficiency
145. A 35-year-old man presents with vomiting, abdominal cramping, and tachycardia 4 hours after attending a barbeque at a local lake. After several hours of swimming, he ate two well-done hamburgers and a large bowl of potato salad. His wife is being treated for similar symptoms and diarrhea. What is the best management strategy?
- A. Administer intravenous fluids and antiemetic agents
 - B. Begin aggressive rehydration and empiric antibiotics after *Escherichia coli* O157:H7 culture
 - C. Prescribe antibiotics and advise all close contacts to seek medical care, even if asymptomatic
 - D. Send stool sample for fecal Gram stain, culture, and leukocytes and begin antibiotics pending results
146. A 60-year-old woman presents with weakness. Vital signs include blood pressure 70/30, pulse 26, respirations 18, temperature 37.2°C (98.9°F), and oxygen saturation 95% on room air. On examination, the lungs are clear and the femoral pulses are weak. Blood glucose level is 110 mg/dL measured by fingerstick. An ECG is obtained (Figure 22). A 1-L normal saline bolus is ordered. Which of the following should be administered next?
- A. Aspirin
 - B. Atropine
 - C. Epinephrine
 - D. Transvenous pacing

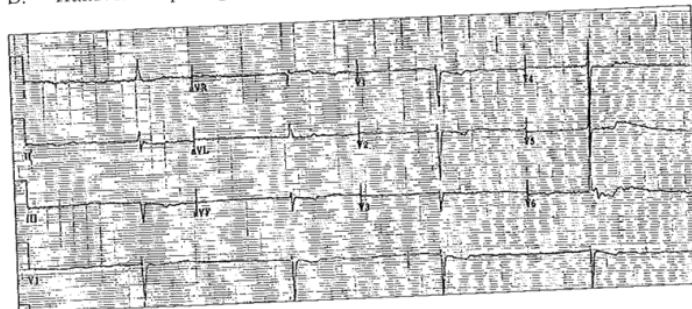


Figure 22

147. Which of the following statements regarding the presentation and management of symptomatic hypoglycemia is correct?
 - A. 50 mL of D50W provides 800 kilocalories
 - B. Diaphoresis, tachycardia, and tremor are reliable diagnostic indicators
 - C. Manifestations can include focal neurologic deficits
 - D. Metformin is a common cause
148. Given rates of infection for all types of mammal bites, routine antibiotic prophylaxis is recommended for bites to the:
 - A. Ankle
 - B. Arm
 - C. Face
 - D. Hand
149. A 13-year-old boy presents with progressively worsening left knee pain of 2 weeks' duration after he fell down. The family's primary care physician diagnosed growing pains, but the mother is concerned because he has also started to limp. Examination reveals no swelling or instability of the knee but pain with internal rotation, abduction, and flexion of the affected lower extremity. The patient is obese, but his vital signs are normal for age. What is the most likely injury?
 - A. Anterior cruciate ligament rupture
 - B. Slipped capital femoral epiphysis
 - C. Tibial spiral fracture
 - D. Toxic synovitis
150. What is the most likely diagnosis of a reddened, tender lump on the interior surface of the upper eyelid?
 - A. Chalazion
 - B. Foreign body
 - C. Herpes simplex virus
 - D. Sty
151. In which of the following conditions is nonsurgical management in the emergency department indicated?
 - A. Balanitis
 - B. Circumcision correction
 - C. Paraphimosis with ischemia
 - D. Phimosis with inability to void

152. A 25-year-old woman presents with increasing motor weakness in her lower extremities for 1 day. Neurologic examination is remarkable for absent deep tendon reflexes at her ankle and knee, as well as grade 3/5 motor strength in her quadriceps and grade 2/5 motor strength in the muscle groups distal to her thigh. She says that she recently had a cold. Which of the following test results could predict impending respiratory failure and the need for intubation?
- A. Forced vital capacity greater than 40 mL/kg
 - B. Negative inspiratory force less than 30 cm H₂O
 - C. PCO₂ less than 25 mm Hg
 - D. PEF less than 300 L/min
153. Which of the following statements regarding the evaluation for compartment syndrome is correct?
- A. Compartment pressure measurement is generally painless and does not require anesthesia
 - B. Compartment pressure readings indicate the need for fasciotomy even in the absence of significant clinical findings
 - C. Local infection is rare as a result of compartment pressure measurement, and sterile technique is not required
 - D. Pain out of proportion to clinical findings is commonly the earliest finding of compartment syndrome
154. A 27-year-old man presents immediately after vomiting at lunch and then aspirating. He has an occasional cough but otherwise feels well. He is afebrile with a respiratory rate of 18 and oxygen saturation 96% on room air. Lung sounds are clear, and there are no signs of respiratory distress. Chest radiograph is clear. What is the next step in management?
- A. Administer antibiotics
 - B. Administer steroids
 - C. Observe the patient for a few hours
 - D. Perform bronchoscopy

155. A 60-year-old man presents by ambulance after a motor vehicle crash in which he was a restrained passenger. He has severe chest pain and is short of breath. Vital signs include blood pressure 150/90, pulse 115, and respirations 28; oxygen saturation is 92%. Chest radiographs are ordered (Figure 23). Which of the following interventions is most appropriate?
- A. Intravenous antibiotics
 - B. Intravenous furosemide
 - C. Oral aspirin
 - D. Tube thoracostomy

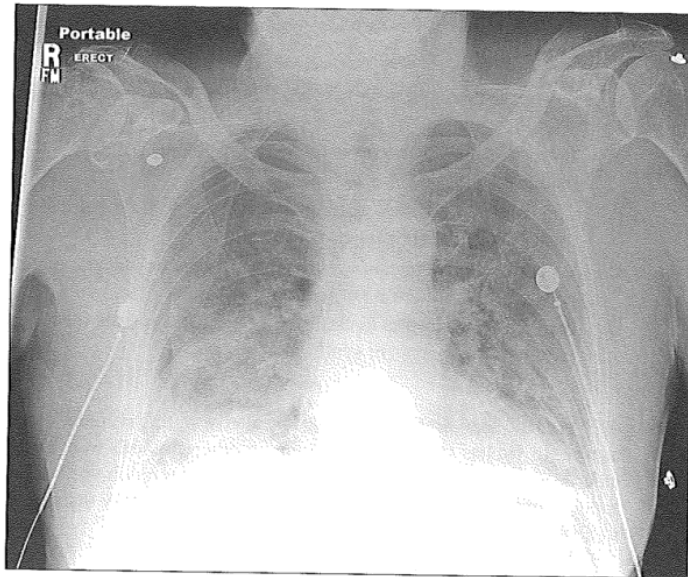


Figure 23

156. In a patient with ataxia, what diagnosis is suggested by a positive Romberg test?
- A. Cerebellar ataxia
 - B. Motor ataxia
 - C. Sensory ataxia
 - D. Vestibular ataxia

157. A mother brings in her 5-month-old son because his right leg does not look right. She points out a difference in the appearance of the skin around the right hip and a difference in the range of motion compared with the left. Clinical examination confirms these findings. The mother denies any history of trauma; she is the sole caretaker. The child is happy and playful during the examination. There are no rashes or markings on the skin, and the child is of normal height and weight. Additional examination is likely to reveal:
- A. A definitive "clunk" with movement of the femoral head
 - B. Definitive radiographic evidence of bilateral hip abnormality
 - C. Hypertrophy of the gluteal muscles on the affected side
 - D. The definitive diagnosis based on skinfold asymmetry
158. A 42-year-old woman presents for evaluation of nighttime epigastric abdominal pain, nausea, and occasional vomiting that have worsened progressively over the past 3 weeks. Symptoms have not been affected by diet, activity, or position but improve during the day and with antacids and omeprazole. She denies NSAID and alcohol use; she is obese and has no significant medical history. Physical examination is unremarkable except for mild epigastric tenderness and hemoccult-negative stool. Which of the following is most likely to prevent recurrence of these symptoms?
- A. Antibiotics
 - B. Cholecystectomy
 - C. H2 blockers
 - D. Oral NSAIDs

159. A 50-year-old man presents with substernal chest pain radiating down his left arm, shortness of breath, and nausea of 30 minutes' duration. He denies other complaints. His only medication is tadalafil for erectile dysfunction, which he took the day before. Vital signs include blood pressure 160/95, pulse 87, respirations 18, and oxygen saturation 99% on room air. Physical examination is normal. An ECG is obtained (Figure 24). He has persistent pain despite administration of aspirin and morphine. Which of the following statements regarding next steps is correct?
- A. Activation of the cardiac catheterization laboratory is warranted
 - B. Administration of NSAIDs for persistent pain is an acceptable treatment approach
 - C. Administration of sublingual nitroglycerin for ongoing ischemic discomfort is an acceptable treatment approach
 - D. This patient meets the criteria for thrombolytic therapy

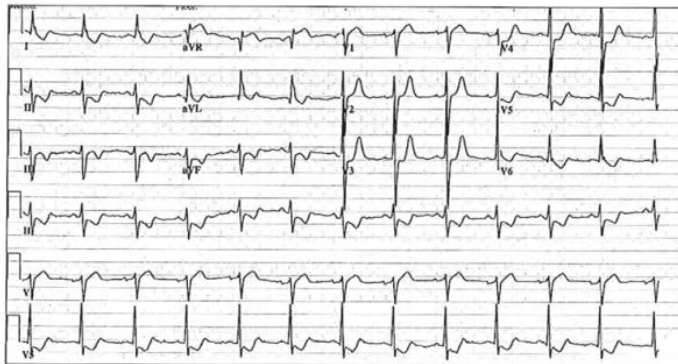


Figure 24

160. Which of the following statements regarding the rash depicted in Figure 25 is correct?
- A. Combination oral and topical antibiotic therapy is routinely necessary
 - B. Gram stain of the lesion is unlikely to demonstrate bacteria
 - C. Topical antibiotic therapy alone is the standard treatment
 - D. Topical povidone-iodine application should be part of routine management



Figure 25

161. In a patient who is intubated for peanut-induced anaphylactic shock refractory to treatment with epinephrine, diphenhydramine, ranitidine, and methylprednisolone, which of the following variables best explains the failed response to therapy?
- A. Hyperthermia
 - B. Hypoxia
 - C. Myocardial dysfunction
 - D. Vascular permeability

162. A 7-year-old girl presents by ambulance in full cardiopulmonary arrest. The paramedic reports that the mother said the girl had been vomiting and had diarrhea for several days. What is the best approach to obtain access?
- A. Central intravenous line in the femoral vein
 - B. Central intravenous line in the subclavian vein
 - C. Intraosseous line in the anterior tibia
 - D. Peripheral intravenous line in the antecubital fossa
163. A 32-year-old prison inmate from Arizona presents with cough, fever, blood-tinged sputum, and weight loss of 2 weeks' duration. A chest radiograph is obtained (Figure 26). What is the most likely causative organism?
- A. *Bacillus anthracis*
 - B. *Coccidioides immitis*
 - C. MRSA
 - D. *Mycobacterium tuberculosis*

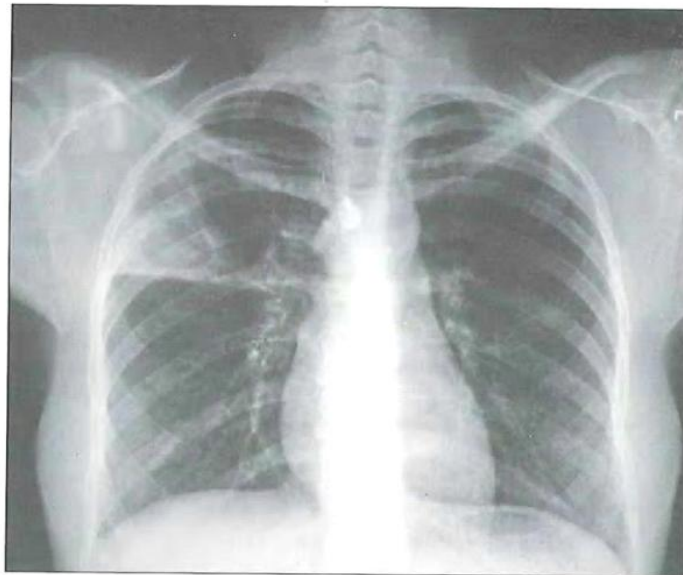


Figure 26

164. A 22-year-old woman presents with vaginal swelling and related pain with walking. Examination reveals a tender ovoid mass but no fever. Which of the following management approaches is most likely to result in treatment failure?
- A. Fistulization
 - B. Incision with no pus obtained
 - C. Marsupialization
 - D. Standard incision and drainage
165. A 22-year-old man presents after 1 week of worsening left shoulder pain. He denies trauma, fever, chills, and rash. Past medical history is significant for sickle cell disease. He is afebrile and has normal vital signs. Radiographs are obtained (Figure 27). Which of the following disorders best explains this patient's presentation?
- A. Avascular necrosis
 - B. Humeral head fracture
 - C. Osteomyelitis
 - D. Tumor



Figure 27

166. An obese 42-year-old man is brought in by police officers for an involuntary psychiatric evaluation. He is in handcuffs and is combative and yelling. Which of the following is the most appropriate action to facilitate the evaluation?
- A. Administer haloperidol 5 mg IM and lorazepam 2 mg IM, and apply four-point restraints
 - B. Administer morphine 10 mg IM
 - C. Place in the prone position and maintain handcuffs behind his back
 - D. Remove handcuffs and move to a treatment room with a nurse
167. In which of the following conditions is the use of succinylcholine contraindicated?
- A. Acute crush injury
 - B. Acute spinal cord injury
 - C. History of neuroleptic malignant hyperthermia
 - D. Myasthenia gravis

168. A 24-year-old man presents by ambulance with a single stab wound to the left side of his chest. He was intubated on the scene; there are no other wounds. Vital signs include blood pressure 60/40, pulse 160, and oxygen saturation 100%. Breath sounds are equal bilaterally. Fluid resuscitation is started, and cardiac ultrasonography is performed at the bedside (Figure 28). The patient quickly loses palpable pulses but does have cardiac activity on the ultrasound. Heart rate remains at 160. Which of the following interventions is most likely to improve the patient's prognosis?
- A. Amiodarone
 - B. Emergency department thoracotomy
 - C. Epinephrine
 - D. Tube thoracostomy



Figure 28

169. Which of the following statements regarding cystic fibrosis is correct?
- A. Hypernatremic hyperchloremic dehydration is common
 - B. Most patients are colonized with *Aspergillus fumigatus* by age 18 years
 - C. Recurrent episodes of pancreatitis with increased levels of amylase and lipase become more frequent with age
 - D. Treatment includes therapies that can help clear mucus, such as N-acetylcysteine aerosols

170. In a patient with jaundice with laboratory findings of a conjugated/direct hyperbilirubinemia, what is the most likely etiology?
 - A. Autoimmune hemolytic anemia
 - B. Gilbert syndrome
 - C. Sclerosing cholangitis
 - D. Sickle cell disease

171. A 67-year-old woman presents after three episodes of hematemesis. She denies significant past medical history and is taking only an over-the-counter medication for osteoarthritis. She appears anxious and diaphoretic. During the interview, she vomits 250 mL of bright red blood. Physical examination is notable for blood pressure 79/58, pulse 122, moderate epigastric abdominal tenderness, and bloody stool. Which of the following is most likely to control the bleeding?
 - A. Bedside esophagogastroduodenoscopy
 - B. Nasogastric tube placement with lavage
 - C. Omeprazole infusion followed by vasopressin drip
 - D. Sengstaken-Blakemore tube

172. A 70-year-old man presents with sharp substernal chest pain and shortness of breath. Vital signs include blood pressure 180/110, pulse 85, respirations 18, and oxygen saturation 99% on room air. Physical examination is unremarkable. The ECG shows ST-segment elevation in leads II, III, and aVF. Which of the following conditions, if part of his past medical history, is an absolute contraindication for thrombolytic therapy?
 - A. Atrial fibrillation treated with warfarin and an INR of 1.5
 - B. Fall with head injury 2 months earlier
 - C. Hemorrhagic stroke 6 months earlier
 - D. Renal insufficiency

173. A patient presents after an acute ingestion of amitriptyline and is intubated for airway protection. An ECG is obtained (Figure 29). What is the most appropriate treatment?
- A. Calcium gluconate
 - B. Magnesium sulfate
 - C. Potassium chloride
 - D. Sodium bicarbonate

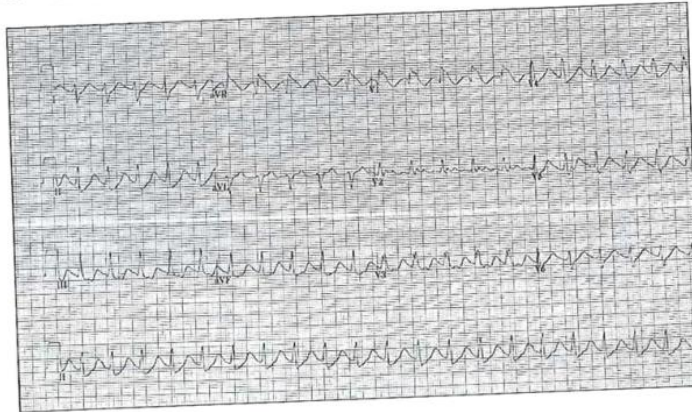


Figure 29

174. In which of the following types of EMS system would fire department personnel arrive first and administer CPR, followed by private ambulance company personnel who provide ALS and transport the patient to the hospital?
- A. Combined public-private
 - B. Public utility
 - C. Station based
 - D. Third service

175. A 28-year-old man presents with a red eye and decreased vision (Figure 30). He wears contact lenses. Without treatment, what is the likely outcome of this condition?
- A. Corneal perforation
 - B. Increased intraocular pressure
 - C. Lens opacification
 - D. Optic nerve injury



Figure 30

176. A 35-year-old man with hemophilia presents with right shoulder pain. He says that he might be bleeding in his shoulder. He weighs 80 kg. How much factor must be used to reach 40% activity?
- A. 400 U
 - B. 600 U
 - C. 800 U
 - D. 1,600 U

177. A 50-year-old woman presents 1 hour after the sudden onset of posterior headache. Her husband says that she started slurring her words and got dizzy. On examination, she is obtunded and exhibits decorticate posturing. Pupils are pinpoint and nonreactive. Blood pressure is 260/140, and pulse is 60. A head CT is obtained (Figure 31). What is the most likely diagnosis?
60. A head CT is obtained (Figure 31). What is the most likely diagnosis?
- A. Carotid artery dissection with intraventricular extension
 - B. Cerebellar hemorrhage with intraventricular extension
 - C. Pontine hemorrhage
 - D. Subcortical hemorrhage

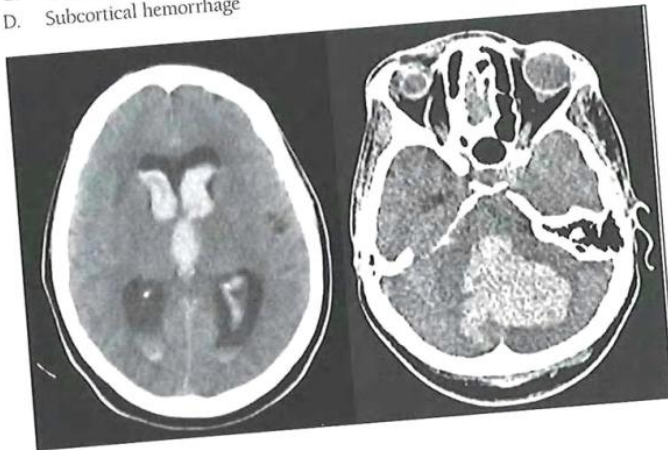


Figure 31

178. A 32-year-old man presents with increasing sore throat, dysphagia, fever, and drooling of several days' duration. Physical examination reveals fetid breath, trismus, and posterior pharyngeal swelling along with the findings in Figure 32. What is the appropriate action?
- A. Aspiration and intravenous antibiotics
 - B. Discharge with oral antibiotics
 - C. Immediate CT scan and drainage in the operating room
 - D. Salt water gargle and mononucleosis testing



Figure 32

179. A 60-year-old man with a long smoking history presents with fever and chest pain. Chest radiography reveals a dense upper lobe consolidation with an air-fluid level in a cavitary lesion. A chest CT scan is obtained (Figure 33). What is the most appropriate next step in management?
- A. Perform biopsy
 - B. Perform bronchoscopy
 - C. Perform tube thoracostomy
 - D. Start intravenous administration of clindamycin



Figure 33

180. Which of the following types of burn has the potential to cause the most severe corneal injury?
- A. Acid
 - B. Alkaline
 - C. Infrared
 - D. Ultraviolet
181. A 77-year-old man presents with abdominal pain. Compared with a younger patient, he is more likely to:
- A. Complain of well-localized pain
 - B. Develop a fever
 - C. Present with peritoneal signs
 - D. Require a surgical procedure

182. An 89-year-old man with a remote history of peptic ulcer disease presents with abdominal and back pain that have worsened over the past 3 days. Blood pressure is 90/60, and pulse is 130. He is thin and ill-appearing and has diffuse abdominal tenderness and guarding with no palpable abdominal masses. The WBC count is 25,000/mcL, and lipase is 3,750 units/L. Alkaline phosphatase, bilirubin, and other liver function test results are normal. Chest and abdominal radiographs are obtained (Figure 34). Which of the following complications best explains this presentation?
- A. Cholangitis
 - B. Mesenteric ischemia
 - C. Perforation
 - D. Ruptured abdominal aortic aneurysm

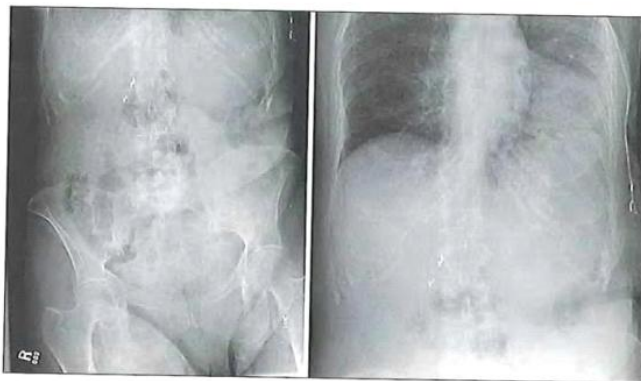


Figure 34

183. A 10-month-old boy is brought in by his parents, who say that he has thrown up and cried off and on all afternoon and seems to have stomach pain. He was well the day before but had four episodes of diarrhea during the night. On physical examination, he is awake but sleepy, with no apparent discomfort at first; within minutes, he begins to cry and pull himself into the fetal position. Vital signs are blood pressure 75/50, pulse 98, respirations 32, and temperature 37.2°C (99°F). Which of the following tests would have the highest diagnostic yield?
- A. Air enema
 - B. CBC count
 - C. Plain abdominal radiographs
 - D. Upper gastrointestinal tract series

184. A 68-year-old man presents with left-sided chest pain and shortness of breath at rest. He says that these symptoms started 5 hours earlier. Vital signs include blood pressure 110/68, pulse 100, respirations 18, and oxygen saturation 100% on room air. Physical examination is unremarkable. An ECG is obtained (Figure 35). Which of the following additional findings supports emergent percutaneous coronary intervention?
- A. Contrast dye allergy
 - B. Normal coronary catheterization 1 week earlier
 - C. Normal intraventricular conduction on a prior ECG
 - D. Resolution of chest pain without treatment

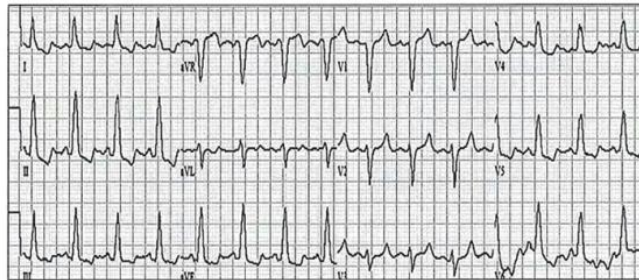


Figure 35

185. A patient with headache, hepatotoxicity, hypercalcemia, and a very elevated opening pressure on lumbar puncture has most likely ingested an excessive amount of:
- A. Vitamin A
 - B. Vitamin B₆
 - C. Vitamin B₁₂
 - D. Vitamin C
186. Which of the following statements regarding emergent treatment of arterial gas embolism in scuba divers is correct?
- A. Endotracheal cuff balloons should be filled with twice the normal amount of air
 - B. Recompression therapy is the only definitive treatment
 - C. The diver should be placed in the Trendelenburg position before undergoing recompression therapy
 - D. The diver surfacing unconscious with stable vital signs should be immediately resubmerged

187. A 37-year-old man presents with a diffuse macular erythrodermal rash. His blood pressure is 84/36, and his temperature is 39°C (102.2°F). Laboratory test results reveal elevated creatinine and transaminase levels and low platelets (86,000/mcL). He was seen 1 week earlier for a nosebleed and has packing in both nostrils. He denies recent travel or outdoor activities. What is the most likely causative organism for his condition?
- A. Dengue virus
 - B. *Rickettsia prowazekii*
 - C. *Staphylococcus aureus*
 - D. *Yersinia pestis*
188. What is the most common emergency department complication of Zollinger-Ellison syndrome?
- A. Cholelithiasis
 - B. Hypertension
 - C. Peptic ulcer disease
 - D. Valvular insufficiency

189. A 28-year-old woman presents with pain, swelling, and redness in her finger that has gotten progressively worse over the past week (Figure 36). What is the appropriate treatment?
- A. Perform a digital nerve block and make a single lateral incision around the ulnar aspect of the finger
 - B. Perform a digital nerve block and use a No. 11 blade to elevate the eponychial fold
 - C. Start intravenous antibiotics and request surgical consultation for closed tendon sheath irrigation
 - D. Wrap the finger with dry gauze and prescribe oral acyclovir with instructions for contact precautions



Figure 36

190. A 16-year-old girl presents with fatigue and vague abdominal pain. Examination reveals that she is thin and bradycardic. The enamel on the lingual surface of her teeth is eroded, and she has calluses on the dorsal aspects of the second and third fingers of her right hand. An ECG is obtained (Figure 37). What is the most likely diagnosis?
- A. Advanced AIDS
 - B. Eating disorder
 - C. Hyperthyroidism
 - D. Psychotic disorder

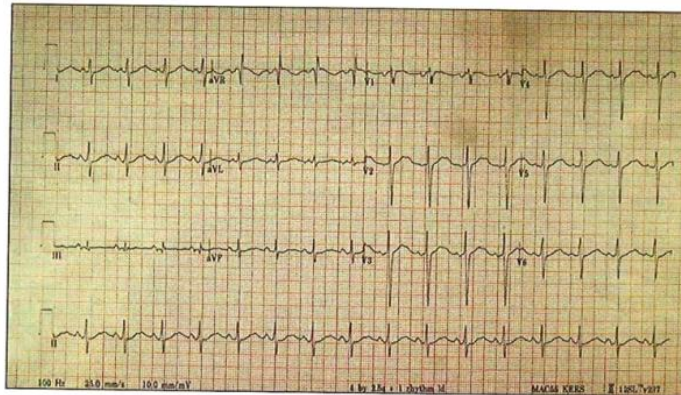


Figure 37

191. An 82-year-old man presents with respiratory distress with a systolic blood pressure of 80/30 and oxygen saturation of 82%. He is successfully intubated but is still hypoxic on a ventilator, with FiO_2 of 100%. Chest radiography reveals bilateral and alveolar infiltrates. He has been taking levofloxacin to treat a urinary tract infection. What is the next step in management?
- A. Administer steroids
 - B. Broaden antibiotic coverage with vancomycin
 - C. Increase the positive end-expiratory pressure
 - D. Increase the tidal volume

192. A 23-year-old woman presents 1 hour after being hit in the eye with a baseball bat. She has severe pain, marked periorbital swelling, and ecchymosis and significant proptosis. Which of the following statements describes appropriate management?
- A. Definitive treatment is administration of mannitol and acetazolamide
 - B. Definitive treatment is lateral canthotomy to release the globe
 - C. Needle aspiration of the hematoma is indicated
 - D. Surgical procedures should be delayed until an ophthalmologist is available
193. Which of the following statements about the presence of delirium in an elderly patient is correct?
- A. 5% of elderly emergency department patients have delirium
 - B. Delirium is assessed using the Mini-Mental State Exam
 - C. Hypoactive delirium is more common than hyperactive delirium
 - D. Mortality effects are reduced if delirium is less than 1 week in duration

194. An anxious-appearing woman presents with her 2-year-old son 1 hour after she saw him swallow a button battery. She says he has not choked, drooled, or vomited since the incident. The child is sitting comfortably in the mother's lap and is playful during the examination, which is normal. A radiograph is obtained (Figure 38). What is the appropriate next step in management?
- A. Admit for serial radiography and expectant management
 - B. Arrange endoscopic retrieval
 - C. Arrange surgical consultation
 - D. Discharge home with next-day followup



Figure 38

195. A 40-year-old woman is sent from her dentist's office for evaluation of elevated blood pressure. She has had intermittent headaches for 2 or 3 weeks but denies blurry vision or other complaints. Vital signs include blood pressure 240/140, pulse 90, respirations 16, and oxygen saturation 100% on room air. Physical examination, laboratory test results, and chest radiographs are unremarkable. An ECG reveals high voltage consistent with left ventricular hypertrophy. Which of the following is the appropriate management strategy?
- A. Enalapril administered intravenously if the patient is pregnant
 - B. Hydrochlorothiazide administered orally and discharge with instructions to follow up with primary care physician within 1 week
 - C. Metoprolol administered intravenously because of the ECG findings
 - D. Nitroglycerin administered intravenously to normalize blood pressure to 140/90 within 2 hours
196. Which of the following statements regarding melanoma is correct?
- A. Chance of survival is excellent with early detection and excision
 - B. Characteristic findings include symmetry and a uniform color
 - C. It is the most common form of skin cancer
 - D. Less than 10% of skin cancer deaths are caused by melanoma
197. A 19-year-old woman with a history of hereditary angioedema presents with a swollen tongue, stridor, and drooling. Which of the following is the most appropriate first step in the management of her condition?
- A. C1 inhibitor
 - B. Epinephrine
 - C. Fresh frozen plasma
 - D. Intubation
198. Which of the following statements regarding the management of blood in the anterior chamber of the eye is correct?
- A. Bleeding can occur spontaneously in patients with sickle cell disease
 - B. Intraocular pressure is generally not affected
 - C. Rebleeding is likely within 24 hours
 - D. Topical beta-blockers are contraindicated

199. A 3-year-old boy presents in respiratory distress. His mother says that he has had a bad cold with profuse, thick, yellow nasal secretions without cough for 2 days. Physical examination reveals fever; mild torticollis; no swelling or redness of the head, eyes, or tympanic membranes; moderate erythema without exudate of the pharynx and without asymmetry of the tonsillar pillars; and shotty anterior cervical lymphadenopathy. The chest is clear to auscultation except for superimposed upper airway noises, and the abdomen is soft without organomegaly. What is the most likely diagnosis?
 - A. Laryngotracheobronchitis
 - B. Mononucleosis
 - C. Peritonsillar abscess
 - D. Retropharyngeal abscess

200. A 44-year-old woman presents with a burning vaginal irritation after using an over-the-counter vaginal antifungal preparation. Urinalysis and wet mount are normal. Examination reveals localized swelling and erythema of the vulva. The vagina is normal with no discharge, and the adnexa are nontender. The most likely diagnosis is:
 - A. Bacterial vaginosis
 - B. Candidiasis
 - C. Contact vulvovaginitis
 - D. Genital herpes

201. Which of the following statements regarding multiple sclerosis is correct?
 - A. All patients develop optic neuritis over the course of their lifetimes
 - B. Internuclear ophthalmoplegia is more suggestive of a diagnosis of neoplasm
 - C. Neurologic symptoms worsen with cold temperatures
 - D. Sensory symptoms are common presenting complaints

202. Which of the following statements regarding shoulder dystocia as a complication of vertex deliveries in childbirth is correct?
 - A. Associated with only minor complications
 - B. Can be relieved by placing the mother in an extreme lithotomy position
 - C. Can be relieved by using a slow and relaxed approach
 - D. Occurs in approximately 10% of cases

203. A 75-year-old woman presents with fever, chest pain, and a cough. Vital signs are blood pressure 150/75, pulse 105, respirations 22, temperature 39.7°C (103.5°F), and oxygen saturation 92% on room air. After administration of 100% oxygen by nonrebreather mask, the reading improves to 95%. Chest radiography is obtained (Figure 39). What is the most appropriate treatment?
- A. Bronchoscopy
 - B. Furosemide
 - C. Needle decompression
 - D. Tube thoracostomy

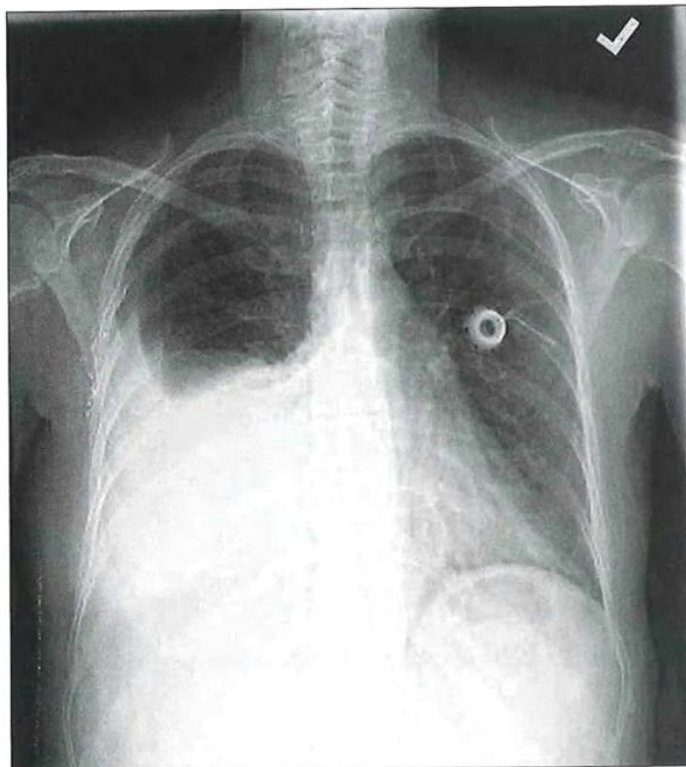


Figure 39

204. A 6-year-old boy presents after knocking out his primary left upper central incisor. His mother has the tooth in a cup of milk. Which of the following statements describes appropriate management?
- A. Length of time the tooth is out of the socket does not affect replantation
 - B. The tooth should be wiped off then replanted
 - C. The tooth should not be replanted
 - D. Water would have been a better transport medium
205. In pediatric patients, which of the following anatomic locations of lymphadenopathy is most likely to be associated with a serious underlying pathology?
- A. Axillary
 - B. Inguinal
 - C. Jugulodigastric
 - D. Supraclavicular
206. A 37-year-old man presents 7 weeks after liver transplantation with recurrent fever, fatigue, and joint pain. Which of the following pathogens is the most common infectious cause of these symptoms?
- A. *Candida* species
 - B. Cytomegalovirus
 - C. *Pseudomonas aeruginosa*
 - D. *Streptococcus pneumoniae*

207. A 68-year-old man presents with intermittent sharp chest pain of several days' duration that is brought on with certain movements. His wife says that she has noticed him rubbing his chest. He is currently asymptomatic. He had an anterior wall ST-segment elevation MI 6 weeks earlier and is taking warfarin. Vital signs include blood pressure 150/85, pulse 67, respirations 14, and oxygen saturation 100% on room air. Physical examination is unremarkable. An ECG is obtained (Figure 40). A prior ECG is not immediately available. What is the appropriate next step?
- Administer an NSAID
 - Obtain diagnostic echocardiography
 - Start antiarrhythmia therapy
 - Start thrombolytic therapy

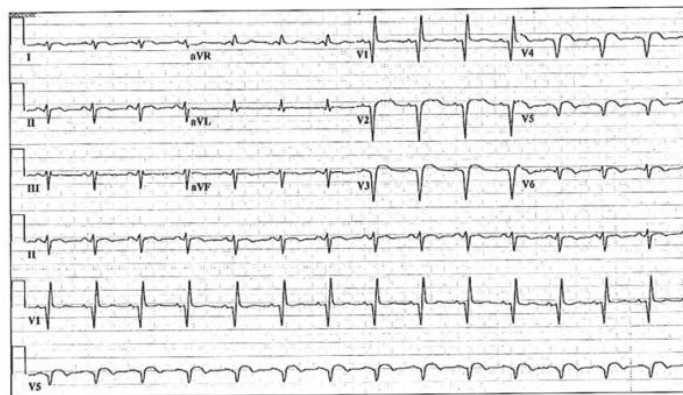


Figure 40

208. Which of the following signs or symptoms seen in carbon monoxide poisoning is the most common?
- Cherry red skin
 - Coma
 - Convulsion
 - Headache

209. At what level of training is a prehospital provider able to perform advanced drug therapy, transthoracic pacing, needle decompression, and cricothyrotomy?
 - A. EMT-B
 - B. EMT-I
 - C. EMT-P
 - D. First responder

210. A 30-year-old woman presents with a laceration on her foot. She says she received vaccines when she was a child but has not had any since she was a teenager. She was born and raised in the United States. Which formulation should be ordered?
 - A. Diphtheria, tetanus, and whole-cell pertussis
 - B. Tetanus and diphtheria toxoid
 - C. Tetanus and diphtheria toxoid with human tetanus immune globulin
 - D. Tetanus, diphtheria toxoid, and acellular pertussis

211. A 45-year-old man presents with headache, vertigo, and blurred vision of 3 days' duration. He is a smoker and says that he has been bruising easily lately. Physical examination is remarkable for swelling in the right leg and engorgement of the skin. Laboratory test results include: WBCs, 15,000/mcL; Hgb, 20 g/dL; Hct, 62%; and platelets, 450,000/mcL. Which of the following interventions should be completed in the emergency department?
 - A. 1-mL normal saline bolus
 - B. Aspirin 81 mg
 - C. Phlebotomize 1 L blood
 - D. Warfarin therapy

212. A 64-year-old man presents with low back pain. Two days earlier, he was hiking when he noticed a dull, aching low back pain on descent. He denies trauma, bowel and bladder incontinence or retention, fever, and weight loss. He has noticed similar pain when walking for long periods of time. Past medical history is significant for smoking. On examination, he walks in a slightly flexed position. Straight-leg raise test is positive bilaterally. He has normal rectal tone, no motor or sensory deficits, and normal pulses. What is the most likely diagnosis?
 - A. Ankylosing spondylitis
 - B. Malignancy
 - C. Peripheral vascular disease
 - D. Spinal stenosis

213. A 30-year-old man presents by ambulance following an episode of sudden-onset chest pain and shortness of breath. He had been sitting at his desk when the symptoms started. He said he had tingling in his hands and had to rush to the bathroom for a loose bowel movement. He was noted to be tachycardic and tachypneic when paramedics arrived, but his symptoms and physical findings gradually resolved without treatment before arrival. He has been seen in the emergency department four times in the past 2 weeks for similar complaints and has had a negative workup each time. Which of the following is the most likely diagnosis?
- A. Agoraphobia
 - B. Coronary artery disease
 - C. Obsessive-compulsive disorder
 - D. Panic disorder
214. A mother presents holding her 4-month-old son. He is apneic and pulseless and does not have a fever. After multiple rounds of CPR, the child is pronounced dead. There is no history of injury or recent illness. The mother says that he went to sleep well and in good spirits but was lifeless when she checked on him. Which of the following was the most likely factor in this child's death?
- A. Crib was kept in the parents' bedroom
 - B. Mother was 32 years old at the time of pregnancy
 - C. Patient had recently received vaccinations
 - D. Patient was sleeping on his stomach
215. A 25-year-old man presents with high fever and stridor. He has been sick for 2 days with a sore throat. He reports pain with swallowing and has a muffled voice. What should be the next step in management?
- A. Albuterol
 - B. Emergent tracheostomy
 - C. Lateral soft tissue radiographs of the neck
 - D. Steroids
216. Which of the following orbital fractures warrants consideration of emergent surgical consultation?
- A. Inferior orbital fracture
 - B. Lamina papyracea fracture
 - C. Medial orbital fracture
 - D. Orbital roof fracture

217. A patient presents with peripheral cyanosis with no central cyanosis. Which of the following is the most likely etiology?
 - A. Dilated cardiomyopathy
 - B. Primary pulmonary hypertension
 - C. Tetralogy of Fallot
 - D. Tricuspid atresia

218. Which of the following features helps distinguish Crohn disease from ulcerative colitis?
 - A. Crohn disease involves the entire bowel wall, resulting in abscess and fistula formation
 - B. Extraintestinal manifestations are more common in Crohn disease than in ulcerative colitis
 - C. Rectal involvement is rare in ulcerative colitis
 - D. Toxic megacolon occurs only in ulcerative colitis

219. A 60-year-old woman presents with shortness of breath and intermittent chest pain that have worsened over the past 3 days. Vital signs include blood pressure 110/65, pulse 105, respirations 26, and oxygen saturation 93% on room air. Examination reveals bibasilar crackles, lower extremity edema, and a systolic ejection murmur heard best at the right sternal border of the second intercostal space that radiates into the carotids. Which of the following statements about her condition is correct?
 - A. Her valvular disease is too severe to be treated medically and requires emergent valve replacement
 - B. She is more likely to have systolic heart failure than diastolic heart failure
 - C. She needs aggressive diuresis to treat her heart failure
 - D. Vasodilators will decrease her preload and worsen her symptoms

220. Which of the following statements regarding pheochromocytoma is correct?
 - A. Characterized by paroxysms of hypertension
 - B. Metoprolol is the drug of choice for medical treatment
 - C. Patients with neurofibromatosis have a lower incidence
 - D. Tumors are most commonly malignant

221. Which of the following scuba divers is most likely to have decompression sickness?
 - A. 19-year-old man with vague chest pain, full neck, and Hamman crunch
 - B. 21-year-old woman with pain at the front of her head, facial edema, and petechial hemorrhages
 - C. 33-year-old woman with vision changes, headache, and dizziness
 - D. 45-year-old man with inability to urinate

222. A 12-year-old girl presents with a swollen, tender right eye (Figure 41). She has no change in visual acuity and has no pain with extraocular movements. Which of the following is the most likely causative agent for this condition?
- A. Delayed-type hypersensitivity to the oil of a plant
 - B. *Haemophilus influenzae*
 - C. Hereditary deficiency of C1 complement inhibitor
 - D. *Staphylococcus aureus*



Figure 41

223. A 22-year-old man presents with flank pain of 12 hours' duration. He also has nausea and vomiting but no fever. Urinalysis reveals hematuria. Despite receiving fluids and an antiemetic agent and parenteral pain medications, he still has colicky pain. Which of the following should be used to help with stone expulsion?
- A. Ceftriaxone 1 g IV
 - B. Cyclobenzaprine 10 mg orally
 - C. Metoprolol 25 mg orally
 - D. Tamsulosin 0.4 mg orally

224. A 22-year-old man presents with spasms in his neck and tongue. When his head is turned to the right, his tongue is noted to be deviated to the right. He is able to voluntarily move his tongue and neck to midline, but the contortions recur. He appears anxious. Which of the following medications is most likely to cause this side effect?
- A. Clozapine
 - B. Ephedrine
 - C. Sumatriptan
 - D. Tramadol
225. Which of the following findings is most likely in the evaluation of a prepubescent girl who reports sexual abuse?
- A. Abnormal thickening of the posterior fourchette
 - B. Bilateral labial contusions
 - C. Normal or nonspecific genital findings
 - D. White or thick yellow discharge
226. A 32-year-old woman presents with a productive cough of 3 days' duration. She does not smoke and has not had fever or chills. Past medical history is unremarkable, and she takes no medications. When asked to describe the sputum, she says it is white. Rhonchi are noted on examination, and the chest radiography findings are normal. What should be the next step in management?
- A. Administer albuterol
 - B. Administer azithromycin
 - C. Administer steroids
 - D. Order ABG analysis
227. Which of the following organisms most often causes osteomyelitis as a result of a puncture wound to the foot?
- A. *Clostridium perfringens*
 - B. *Pseudomonas aeruginosa*
 - C. *Staphylococcus aureus*
 - D. *Streptococcus pyogenes*

228. Which of the following patients requires emergent head CT scanning?
 - A. 23-year-old woman with a gradual onset, throbbing, bilateral frontal headache
 - B. 38-year-old woman who is at 28 weeks' gestation with hypertension, severe headache, and blurred vision
 - C. 65-year-old woman with a new onset seizure but no focal neurologic findings
 - D. 79-year-old woman with near syncope and an old right hemiparesis

229. A 20-year-old man with a history of Crohn disease presents with fever, mild diarrhea, and severe right hip pain for 1 day. He is ill-appearing and denies trauma or a fall. Vital signs include blood pressure 100/60, pulse 120, and temperature 38°C (100.4°F). Examination reveals mild abdominal and lumbar tenderness and severe gait antalgia with normal hip and extremity range of motion. Following a CT scan, what is the appropriate next step?
 - A. Administer corticosteroids
 - B. Begin intravenous antibiotics and arrange for surgical drainage
 - C. Insert a rectal tube for bowel decompression
 - D. Perform ultrasound-guided hip arthrocentesis

230. A 10-day-old girl is brought in by her parents, who say that she has been breathing fast and seems to be losing weight. Vital signs include blood pressure 65/30, pulse 140, and respirations 50. Physical examination reveals a cardiac gallop with a hyperdynamic precordium and a liver edge that is 2 cm below the right costal margin. Which of the following diagnostic tests would most likely provide a specific diagnosis?
 - A. AP chest radiography
 - B. Cardiac MRI
 - C. Echocardiography
 - D. Lateral chest radiography

231. Which of the following statements regarding ST-segment elevation MI during pregnancy is correct?
 - A. Low-molecular-weight heparin is preferred over unfractionated heparin
 - B. Most pregnant women with this disease have normal coronary arteries
 - C. Percutaneous coronary intervention is the treatment of choice
 - D. Pregnancy is an absolute contraindication for thrombolytics

232. Which of the following best characterizes the rash in erythema multiforme?
- A. Asymmetric
 - B. Spares mucous membranes
 - C. Spares palms and soles
 - D. Target lesion presence
233. A 28-year-old woman presents with progressively worsening shortness of breath, intermittent fever, and weight loss of a few weeks' duration. Physical examination reveals elbow and knee stiffness and a rash (Figure 42). Chest radiograph reveals bilateral hilar lymphadenopathy, and hypercalcemia is noted on laboratory test results. What is the most likely diagnosis?
- A. Coccidioidomycosis
 - B. Non-Hodgkin lymphoma
 - C. Sarcoidosis
 - D. Tuberculosis



Figure 42

234. A 48-year-old prison inmate is brought in for evaluation of a spider bite (Figure 43). What is the best course of treatment?
- A. Contact the poison center to arrange for *Loxosceles reclusa* antitoxin
 - B. Request a surgical consultation for wide excision of the lesion
 - C. Start oral dapsone and topical antibiotic therapy and refer to general surgery
 - D. Start oral trimethoprim-sulfamethoxazole with routine local wound care



Figure 43

235. Which of the following is the earliest sonographic finding in pregnancy?
- A. Double decidual sac sign
 - B. Fetal pole
 - C. Gestational sac
 - D. Yolk sac
236. Which of the following statements regarding necrotizing soft tissue infections is correct?
- A. Antibiotic monotherapy is not appropriate
 - B. Clostridial myonecrosis is most commonly caused by wound contamination
 - C. Degree of muscle necrosis can be estimated based on associated skin change
 - D. Early signs of gas in the tissue help make the diagnosis in the majority of patients

237. Which of the following is more commonly associated with a nondeliberate somatization disorder than with a deliberate factitious disorder and malingering?
- A. Acquiescence to invasive diagnostic testing
 - B. Antisocial personality disorder and secondary gain
 - C. Mention of a medical-legal context for the visit
 - D. Poor compliance with evaluation and treatment
238. A patient presents with blood-tinged sputum 3 days after undergoing a tracheostomy. Vital signs are stable with no respiratory distress. What should be the next step in management?
- A. Change the tracheostomy tube
 - B. Deflate the air in the cuff
 - C. Obtain ENT consultation
 - D. Perform deep tracheal suctioning
239. A 21-year-old man presents with lacerations over the second and third metacarpophalangeal joints of his right hand after being involved in a fistfight the previous evening. Which of the following statements regarding his treatment is correct?
- A. Absorbable sutures should be used because he might not get followup care
 - B. Antibiotics are not indicated because the likelihood of infection is low
 - C. Delayed primary closure or healing by secondary intention is appropriate
 - D. First-generation cephalosporins should be used as first-line treatment
240. A 74-year-old woman presents with weakness in her legs. She cannot walk and says that she has not seen a doctor in the past 10 years. She has had a rash on both shins for 4 months that has not responded to over-the-counter corticosteroids. Which of the following additional findings supports a diagnosis of myopathy?
- A. Distal muscle weakness with abnormal sensation and loss of control of bladder or bowel
 - B. Intermittent weakness that is relieved by rest with normal reflexes and normal sensation
 - C. Proximal muscle and limb girdle weakness with muscle tenderness and normal reflexes
 - D. Symmetrical ascending weakness with decreased or absent reflexes and minimal sensory involvement

241. What is the most common cause of small bowel obstruction in children?
- A. Adhesions
 - B. Hernia
 - C. Intussusception
 - D. Midgut volvulus
242. A 30-year-old man presents with shortness of breath, palpitations, and lightheadedness only during exertion. There is no history of syncope. His father died suddenly at age 43 years. Vital signs are blood pressure 143/90, pulse 78, respirations 20, and oxygen saturation 100% on room air. An ECG is obtained (Figure 44). Which of the following tests will have the highest diagnostic yield?
- A. Chest CT
 - B. Echocardiography
 - C. Exercise stress test
 - D. Holter monitor

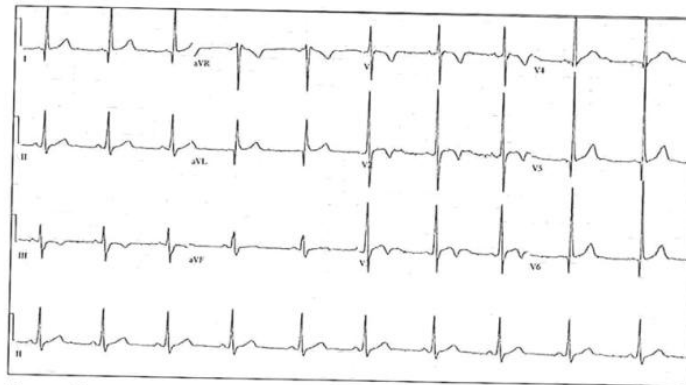


Figure 44

243. Intermittent agitation and rapid, full return of consciousness from a state of coma are characteristic of poisoning from which of the following agents?
- A. Carisoprodol
 - B. Flunitrazepam
 - C. Gamma-hydroxybutyric acid
 - D. Methylene dioxymethamphetamine

244. From the scene of a chemical plant explosion, which of the following victims should be sent to the hospital first?
- A. 22-year-old man who is screaming and whose left hand has been torn off
 - B. 35-year-old woman with respirations 6/min with blue coloration who is able to talk in one-word sentences
 - C. 45-year-old woman with third-degree burns to both lower extremities who is alert and stable
 - D. 55-year-old man who is pulseless and has a piece of metal in his chest
245. A 62-year-old woman presents with flashing lights and floaters seen only with her left eye and decreased vision. She has no pain or tenderness to palpation. Visual acuity is measured as 20/200 in the left eye and 20/25 in the right. Slit lamp examination is unremarkable. What is the most likely diagnosis?
- A. Optic neuritis
 - B. Retinal detachment
 - C. Temporal arteritis
 - D. Vitreous hemorrhage
246. A 15-year-old girl at 36 weeks' gestation by dates gives birth in the emergency department. The amniotic fluid is clear, and the baby is delivered without difficulty. The baby has a pulse of 140 and is pink and vigorous. What are the key initial steps to appropriate neonatal resuscitation?
- A. Administer supplementary oxygen
 - B. Begin chest compressions using the C-clamp technique
 - C. Dry, stimulate, and provide warmth
 - D. Establish intravenous access using an umbilical line
247. A 59-year-old man presents with perineal pain of 3 days' duration. He has cirrhosis and newly diagnosed diabetes. Examination reveals an ill-appearing, febrile patient with exquisite tenderness, redness, and warmth to the perineal area. Fluids and antibiotics are administered, and a bedside ultrasound examination is performed. What is the pathognomonic finding?
- A. Elevation of the base of the bladder
 - B. Gas in the scrotal wall
 - C. Hyperemia of the testes
 - D. Normal scrotum

248. A 65-year-old man with hypertension and diabetes presents after a 20-minute episode of left arm and leg weakness and numbness. His symptoms have completely resolved. He had a similar episode the previous day that lasted between 5 and 10 minutes. He takes furosemide 40 mg daily, insulin, and aspirin 325 mg daily. Which of the following statements best summarizes his level of risk for future episodes?
- A. High risk: symptoms occurred while he was taking a prophylactic antiplatelet agent
 - B. Low risk: symptoms did not involve dysphagia or dysarthria
 - C. Low risk: symptoms resolved in less than 30 minutes
 - D. Moderate risk: based on past medical history
249. Which of the following statements regarding the treatment of the disorder shown in Figure 45 is correct?
- A. Blood remains fluid up to 36 hours after the injury
 - B. Nail removal is required for definitive treatment
 - C. Patients undergoing nail trephination should be treated with antibiotics
 - D. Presence of an underlying fracture is a contraindication for nail trephination



Figure 45

250. A patient presents with fever, flu symptoms, and breathing difficulty that has rapidly progressed to near respiratory failure. Chest radiography reveals bilateral pleural effusion with mediastinal widening, and chest CT reveals some hilar lymphadenopathy but no pulmonary embolism. What is the most likely diagnosis?
- A. Esophageal rupture
 - B. Inhalation anthrax
 - C. Lung cancer
 - D. Pneumonia
251. Which of the following statements regarding blunt cardiac injuries is correct?
- A. Blunt cardiac trauma commonly leads to direct injury of the coronary arteries
 - B. ECG is the gold standard in diagnosing blunt cardiac trauma
 - C. Large myocardial contusions can present with hemodynamically significant cardiogenic shock
 - D. Myocardial contusion typically causes complications that require intervention
252. Which of the following is seen most commonly in true generalized seizures?
- A. Altered mental status
 - B. Duration exceeding 2 minutes
 - C. Emotional provocation
 - D. Gradual onset
253. Which of the following metabolic abnormalities is a common cause of adynamic small bowel ileus?
- A. Hypermagnesemia
 - B. Hypernatremia
 - C. Hypocalcemia
 - D. Hypokalemia
254. Which of the following statements regarding the use of multidetector CT pulmonary angiography to diagnose pulmonary embolism is correct?
- A. Inadequate contrast administration can lead to a false-positive result
 - B. Motion artifact leads to a false-negative result
 - C. Sensitivity for detecting any pulmonary embolism is higher than 97%
 - D. Sensitivity is improved with venous phase CT venography of the lower extremities

255. A 56-year-old man with insulin-dependent diabetes presents after insulin noncompliance. Laboratory test results are as follows: sodium, 132 mEq/L; potassium, 4.9 mEq/L; chloride, 100 mEq/L; bicarbonate, 12 mEq/L; BUN, 20 mg/dL; creatinine, 1.2 mg/dL; glucose, 600 mg/dL; phosphorus, 3 mg/dL; pH, 7.26; PCO_2 , 26 mm Hg. Urinalysis is strongly positive for ketones. Normal saline and an insulin drip are started. Which of the following is most important to administer next?
- A. D5 in half normal saline
 - B. Potassium chloride
 - C. Sodium bicarbonate
 - D. Sodium phosphate
256. Which of the following presentations is most consistent with smallpox infection?
- A. Diplopia, blurry vision, difficulty swallowing, and dysarthria with a purulent extremity wound
 - B. Large, painful regional lymphadenopathy with purulent drainage
 - C. Synchronized vesicular eruption with highest concentration on the face and limbs
 - D. Vesicular eruption primarily on the trunk with lesions in various stages of development
257. A 30-year-old woman at 38 weeks' gestation presents with active contractions and vaginal leakage of fluid. She reports no complications during her pregnancy. Bedside ultrasonography shows positive fetal cardiac activity. Fetal heart tracings show variable decelerations and episodes of bradycardia. Bimanual examination is remarkable for a palpable, pulsating, cordlike structure that protrudes 3 cm past the cervix. What is the most appropriate initial management?
- A. Elevate the presenting fetal part
 - B. Perform emergent bedside cesarean delivery
 - C. Push the fetus back into the uterus
 - D. Reduce the cord

258. A 48-year-old woman presents with burning pain in both hands. She says that she has felt these symptoms for the past few months and that they are worse at night. Past medical history is significant for diabetes and obesity. On examination, the burning pain can be reproduced in her right hand on the palmar aspect of the thumb, index finger, and middle finger by flexion of the wrist for 1 minute and tapping of the volar aspect of her wrist crease over the median nerve. There is also noticeable thenar atrophy; she has grade 4/5 strength when testing opposition. Which of the following is the appropriate disposition?
- A. Administer a corticosteroid injection in the carpal tunnel
 - B. Discharge with a prescription for carbamazepine and recommend tighter glucose control
 - C. Obtain MRI of the hand
 - D. Place a volar splint, prescribe ibuprofen, and follow up with primary care physician
259. Which of the following characteristics is associated with a greater risk of suicide in a patient with depression?
- A. Being married
 - B. First-time attempt
 - C. Loss of rational thinking as a result of psychosis
 - D. Younger than 35 years
260. Two young parents bring their 4-month-old daughter to the emergency department for excessive crying. She has been gaining weight appropriately, is afebrile, and had a normal birth history. Which of the following has the highest yield in leading to a correct diagnosis?
- A. Applying a cardiac monitor
 - B. Obtaining a urinalysis and culture
 - C. Staining the eyes with fluorescein
 - D. Undressing the infant completely
261. A 15-year-old girl presents after an episode of difficulty breathing. She says that she felt like she was going to pass out and that she had tingling in her hands and feet. Her symptoms are now resolving. What is the next step in management?
- A. Check serum acetaminophen level
 - B. Order stat echocardiography
 - C. Provide calm reassurance
 - D. Start high-flow oxygen

262. A 24-year-old woman presents with abdominal and chest pain after falling off of a horse. Chest radiograph reveals some irregularity of the left hemidiaphragm. Which of the following provides the most useful diagnostic information?
- A. Location of the abnormal finding
 - B. Placement of a nasogastric tube
 - C. Results of diagnostic peritoneal lavage
 - D. Results of MRI
263. In a well-appearing 32-year-old man who presents with crampy abdominal pain and diarrhea of 5 days' duration, which of the following is the preferred management approach?
- A. Empiric antibiotic therapy, laboratory tests, and CT scan
 - B. Laboratory tests, empiric antibiotic therapy, and intravenous fluids
 - C. Oral rehydration and symptomatic outpatient therapy
 - D. Oral rehydration, laboratory tests, and empiric antibiotic therapy
264. Which of the following is the most common cause of anal fistula?
- A. *Chlamydia*
 - B. Colorectal malignancy
 - C. Intersphincteric abscess
 - D. Ulcerative colitis
265. Which of the following statements regarding deep vein thrombosis is correct?
- A. Most calf vein thrombi extend into the proximal deep veins, usually within a week after presentation
 - B. Most patients have classic physical examination findings
 - C. Pregnancy is a predictor according to the Wells criteria
 - D. Up to 10% to 15% of calf vein thrombi result in pulmonary embolism

266. A 48-year-old man presents with the rash depicted in Figure 46. He has been taking trimethoprim-sulfamethoxazole for a prostate infection but is otherwise healthy. Vital signs are blood pressure 130/70, pulse 108, respirations 14, and temperature 38°C (100.4°F). Following fluid administration, what is the appropriate disposition?
- A. Admit to the burn ICU
 - B. Discharge with an oral steroid taper and outpatient dermatology followup
 - C. Discharge with strict return precautions
 - D. Start intravenous steroids and admit to a floor bed



Figure 46

267. One week after a kidney transplant, a patient presents with uncontrolled hypertension, anuria, and no fever. He has normal cyclosporine levels and a 20% increase in creatinine level. Which of the following disorders best explains this presentation?
- A. Chronic rejection
 - B. Cyclosporine nephrotoxicity
 - C. Renal artery thrombosis
 - D. Urine leak
268. A 65-year-old man presents with painless sudden-onset loss of vision in his right eye. Past medical history is significant for diabetes, hypertension, and hyperlipidemia. Visual acuity in the affected eye is hand movement only. Ophthalmoscopic examination is performed (Figure 47). What is the most likely diagnosis?
- A. Central retinal artery occlusion
 - B. Central retinal vein occlusion
 - C. Hypertensive retinopathy
 - D. Vitreous hemorrhage



Figure 47

269. A 25-year-old woman presents with swelling in her face, dark urine, and a headache. She was recently treated for a sore throat. On examination, she is hypertensive and has periorbital edema. Urinalysis reveals proteinuria and hematuria. Which of the following medications should be administered?
- A. Furosemide
 - B. Hydrochlorothiazide
 - C. Lisinopril
 - D. Metoprolol
270. A 23-year-old man presents with bilateral peripheral facial nerve paralysis. He says that he has felt fatigued for the past 1 to 2 weeks. He is an avid hiker but denies any injury. He is not sexually active and has no significant social history. He has no other neurologic deficit. What is the most likely pathogen?
- A. *Borrelia burgdorferi*
 - B. Herpesvirus
 - C. HIV
 - D. *Rickettsia rickettsii*
271. Which of the following statements regarding escharotomy is correct?
- A. Escharotomy typically involves significant blood loss when properly performed
 - B. Muscle compartments in extremities with circumferential burns should be decompressed as soon as compartment pressures exceed 10 mm Hg
 - C. No anesthesia is needed for local pain control with full-thickness burns
 - D. Peripheral pulses are reliably absent when escharotomy of an extremity is needed
272. Which of the following conditions is most commonly the underlying cause of superior vena cava syndrome?
- A. Goodpasture syndrome
 - B. Lung cancer
 - C. Pneumonia
 - D. Pregnancy

273. A 32-year-old woman presents after a motor vehicle crash in which she was the restrained driver. She has abdominal pain and is hemodynamically stable. Abdominal examination reveals ecchymosis horizontally across the abdomen near the umbilicus. Bedside FAST examination results are negative, and a CT scan reveals no injuries. Re-examination reveals a tender abdomen. What is the most appropriate management?
 - A. Admit for 24 hours for serial abdominal examinations
 - B. Discharge with instructions to follow up with primary care physician in 3 to 5 days
 - C. Obtain formal abdominal ultrasound examination
 - D. Perform diagnostic peritoneal lavage

274. In the evaluation of a patient with back pain, which of the following features of the pain is reassuring for the absence of serious underlying pathology?
 - A. Gradual onset
 - B. Nocturnal pain
 - C. Onset with heavy lifting
 - D. Unrelieved by rest

275. Which of the following findings significantly increases the pretest probability of appendicitis?
 - A. Anorexia and nausea
 - B. Right lower quadrant pain
 - C. Temperature higher than 38°C (100.4°F)
 - D. WBCs greater than 10,000/mcL

276. A social worker brings a 10-month-old boy to the emergency department for an examination before placing him in a foster home. He was removed from his own home because of concerns involving his school-aged sister. His clothes are stained, somewhat dirty, and frayed. On physical examination, he appears thin and long; he has a normal head size and redundant skin folds, and he cannot sit unsupported. He does not seem to be dysmorphic. Which of the following is the most likely cause of his condition?
 - A. Inborn error of metabolism
 - B. Insufficient caloric intake
 - C. Intestinal atresia
 - D. Intracranial neoplasm

277. A 55-year-old man with a history of hypertension presents with acute shortness of breath and pleuritic chest pain. An ECG shows sinus tachycardia. Computed tomography of the chest is ordered (Figure 48). Following administration of 2 L normal saline, vital signs are blood pressure 90/50, pulse 110, respirations 20, and oxygen saturation 97% on 4 L of oxygen. What are the most appropriate next steps in the management of this patient's condition?
- A. Obtain a transthoracic echocardiogram; if there is evidence of right ventricular dysfunction, start unfractionated heparin and thrombolytic therapy
 - B. Start low-molecular-weight heparin; admit the patient for monitoring of clinical status and right ventricular function
 - C. Start thrombolytic therapy and unfractionated heparin; obtain thoracic surgery consultation
 - D. Start unfractionated heparin; obtain a transthoracic echocardiogram and a troponin level; if either is abnormal, start thrombolytic therapy

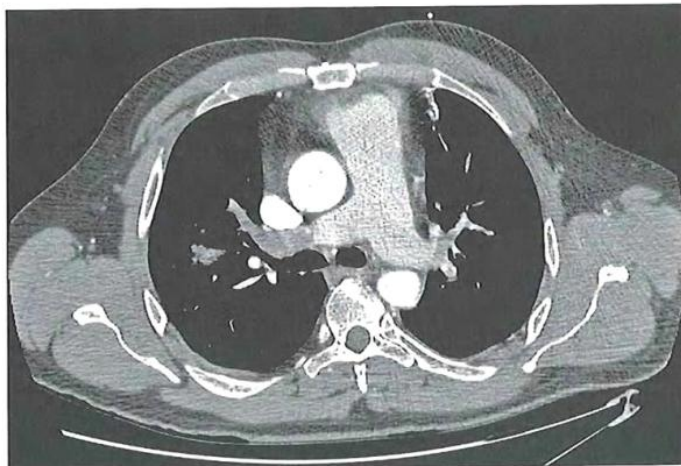


Figure 48

278. Which of the following statements regarding methemoglobinemia is correct?
 - A. Anemia predisposes to cyanosis at lower percentages of methemoglobinemia
 - B. Methylene blue administration is contraindicated
 - C. Oxygen administration will fail to correct the cyanosis
 - D. Sodium nitrite is an effective antidote

279. Which of the following courses of illness is consistent with plague?
 - A. Conjunctivitis with skin blisters progressing to full-thickness burns, hemorrhagic pulmonary necrosis, bone marrow suppression, and death from secondary infection
 - B. Flulike illness with malaise, fever, and cough progressing to shock, dyspnea, stridor, and hemorrhagic meningitis
 - C. Rhinorrhea and miosis followed by increased secretions, dyspnea, and muscle fasciculations progressing to apnea, seizures, flaccid paralysis, and death
 - D. Sudden onset of fever, malaise, and cough followed by fulminant pneumonia, hemoptysis, respiratory failure, disseminated intravascular coagulation, circulatory collapse, and death within 24 hours

280. A 68-year-old farmer from Ohio presents with a headache, cough, and fever he says he has had for 2 weeks. He has multiple nodules on his chest radiograph and red, painful bumps on his anterior legs. Which of the following organisms is most likely causing this infection?
 - A. *Cryptococcus neoformans*
 - B. *Cryptosporidium parvum*
 - C. *Histoplasma capsulatum*
 - D. *Mycobacterium tuberculosis*

281. A 23-year-old woman at 34 weeks' gestation presents with new-onset headache for the past 3 days and blurry vision for 1 day. Blood pressure is 182/115. Physical examination reveals generalized nonpitting edema and a nontender gravid abdomen. Laboratory test results include the following: platelets, 80,000/mcL; AST, 321 units/L; ALT, 280 units/L; normal coagulation studies; and significant proteinuria on urinalysis. This patient is at increased risk of developing:
 - A. Cholecystitis
 - B. Intracranial bleeding
 - C. Pancreatitis
 - D. Placenta previa

282. A 62-year-old man presents with increasing pain and swelling in his right knee of 2 weeks' duration. He says that both knees have hurt for the past year and that it is worse after he works all day. On examination, he is afebrile and appears well, and other joints seem normal. His right knee is enlarged compared with the left and warm. There is no erythema and no effusion. He can move the joint but with some discomfort. What is the most likely diagnosis?
- A. Gout
 - B. Osteoarthritis
 - C. Rheumatoid arthritis
 - D. Septic arthritis
283. Which of the following is the most commonly injured nerve in an anterior shoulder dislocation?
- A. Axillary
 - B. Brachial plexus
 - C. Radial
 - D. Ulnar
284. A 25-year-old man presents with a severe asthma exacerbation and is intubated. After being stable for several hours, he develops hypoxia with hypotension and is increasingly difficult to ventilate. Breath sounds are equal bilaterally. What is the next step in management?
- A. Administer a nebulized albuterol treatment
 - B. Order stat chest radiography
 - C. Perform emergent needle decompression
 - D. Remove him from the ventilator and allow him to exhale
285. A 24-year-old man presents with pain and deformity over his right clavicle after a fall. Radiographs reveal a fracture of the middle third clavicle. It is shortened by 2.5 cm and displaced. Which of the following statements regarding his treatment and disposition is correct?
- A. For pain control and fracture reduction, a figure-of-eight harness is better than a simple sling
 - B. He should be encouraged to start active full range of motion exercises with the shoulder
 - C. Location of the fracture is uncommon and increases the risk for neurovascular compromise
 - D. Urgent outpatient orthopedic referral is required

286. Which of the following is a possible cause of dyspnea?
- A. Hyperglycemia
 - B. Hyperkalemia
 - C. Metabolic acidosis
 - D. Metabolic alkalosis
287. A 24-year-old woman at 14 weeks' gestation presents with symptoms suggestive of acute appendicitis. The appendix cannot be visualized using ultrasonography. What is the appropriate next step?
- A. Admit for treatment with parenteral antibiotics
 - B. Obtain surgery or obstetrics consultation
 - C. Order abdominal and pelvic CT scanning
 - D. Perform serial abdominal examinations in the observation unit
288. A 30-year-old woman presents with nonradiating, nonexertional, pleuritic anterior chest pain that started the day before while she was painting. She denies fever, cough, shortness of breath, and leg swelling. She has no significant past medical history. Her only medications are oral contraceptive pills. Vital signs are blood pressure 130/85, pulse 105, respirations 18, and oxygen saturation 99% on room air. Physical examination is unremarkable except for partially reproducible right parasternal chest wall tenderness. Which of the following diagnostic tests should be ordered next?
- A. Chest radiography
 - B. Chest radiography and ECG
 - C. Chest radiography, ECG, and chest CT angiography
 - D. Chest radiography, ECG, and D-dimer
289. Which of the following statements regarding thyroid storm is correct?
- A. Administration of an iodinated contrast material is a precipitating factor
 - B. An elevated thyroxine-stimulating hormone level is expected
 - C. Corticosteroid administration is contraindicated
 - D. Iodine should be administered before propylthiouracil

290. A 40-year-old man presents to the emergency department at a ski resort 1 day after arriving. He has a headache, fatigue, anorexia, and insomnia. Vital signs include pulse 105, respirations 22, and oxygen saturation 90% on room air. Which of the following medications would be detrimental to his condition?
- A. Acetazolamide
 - B. Dexamethasone
 - C. Morphine
 - D. Prochlorperazine
291. A 32-year-old man with diabetes presents with headache and left eye pain. He describes the headache as sharp, isolated to his left midface, and progressively worse over the past 2 days. Four days earlier, he underwent a root canal for a complicated dental abscess. Which of the following physical examination findings would be most consistent with a serious intracranial complication of a dental abscess?
- A. Decreased vision in the left eye with an afferent pupil defect
 - B. Lateral gaze palsy of the left eye
 - C. Left-sided facial paresis
 - D. Left-sided ptosis, miosis, and loss of sweating
292. Which of the following statements regarding neonatal jaundice is correct?
- A. A full-term, 2-day-old infant can tolerate a higher total bilirubin level than can a full-term, 5-day-old infant
 - B. ABO incompatibility between the mother and infant causes conjugated (direct) hyperbilirubinemia
 - C. Breastfeeding should be discontinued for any infant with breast milk jaundice
 - D. Initial treatment of an unconjugated (indirect) hyperbilirubinemia is phototherapy
293. A 43-year-old man presents with an unresolving penile erection of 6 hours' duration. He has had an itchy rash for 1 day and has taken diphenhydramine. Past medical history is significant for depression, and he has had no prior surgeries. Examination reveals an erect penis with no evidence of bleeding. What is the etiology of the priapism?
- A. Antidepressant
 - B. Compulsive sexual arousal
 - C. Diphenhydramine
 - D. Peyronie disease

294. A 51-year-old man presents clutching his head and complaining of the worst headache of his life. He says that it started 12 hours earlier and that it was sudden onset and different from his occasional migraine headaches. Past medical history includes placement of a mechanical mitral valve; he is currently taking warfarin. Vital signs are blood pressure 190/76, pulse 100, respirations 22, and temperature 36°C (96.8°F). Noncontrast head CT is obtained (Figure 49). Which of the following statements regarding this patient's management is correct?
- A. Lumbar puncture should be performed to confirm the diagnosis
 - B. Nimodipine should be started to prevent cerebral ischemia
 - C. Nitroprusside should be started to lower blood pressure
 - D. Reversal of warfarin is contraindicated

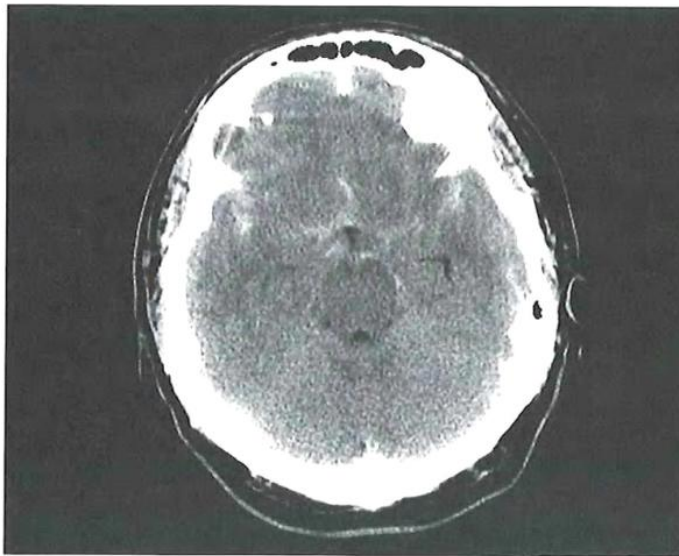


Figure 49

295. What is the best solution to resolve a Foley catheter balloon that does not deflate properly?
- A. Instill a chemical such as toluene
 - B. Overextend the balloon
 - C. Pass a guidewire into the balloon port
 - D. Puncture the balloon with a suprapubic needle

296. Which of the following is appropriate for outpatient treatment of community-acquired pneumonia in a previously healthy adult?
- A. Azithromycin
 - B. Ceftriaxone
 - C. Ciprofloxacin
 - D. Vancomycin
297. A 30-year-old woman presents with partial-thickness burns on her entire back and the entire posterior aspects of both arms after her shirt caught fire. No other parts of her body are burned. She weighs 65 kg. As calculated using the Parkland formula, how much crystalloid solution is required in the first 24 hours?
- A. 2,340 mL
 - B. 4,680 mL
 - C. 7,020 mL
 - D. 9,360 mL
298. Which of the following statements correctly differentiates small-volume hemoptysis from hematemesis?
- A. Hematemesis is accompanied by bile
 - B. Hematemesis is dark red and alkaline
 - C. Hemoptysis is accompanied by mucus
 - D. Hemoptysis is bright red and alkaline

299. A 3-week-old boy born at 32 weeks' gestation presents with hematemesis following 1 day of inconsolable crying and multiple episodes of nonbilious emesis. Vital signs include pulse 216, respirations 68, and temperature 35.7°C (96.3°F). On examination, he has a weak cry and no tears. The abdomen is distended, and the rectal examination reveals a small amount of blood mixed with stool. Which of the following diagnoses does the radiograph finding in Figure 50 confirm?

- A. Hirschsprung disease
- B. Midgut volvulus
- C. Necrotizing enterocolitis
- D. Pyloric stenosis



Figure 50

300. A 58-year-old woman presents by ambulance with sudden shortness of breath. Paramedics administered two doses of nitroglycerin 0.4 mg sublingually and furosemide 80 mg IV. She has a history of hypertension and chronic renal disease. Vital signs include blood pressure 150/78, pulse 118, respirations 32, and oxygen saturation 88% on room air. Physical examination reveals crackles diffusely and bilateral lower extremity edema. An ECG reveals sinus tachycardia and no acute ischemia. Which of the following should be administered to decrease the need for intubation?
- A. Aspirin 325 mg orally
 - B. Ipratropium 0.25 mg by nebulizer
 - C. Milrinone drip
 - D. Noninvasive positive-pressure ventilatory support
301. Which of the following pairings of skin lesion and morphology is correct?
- A. Bulla – fluid-filled circumscribed lesion less than 0.5 cm in diameter
 - B. Macule – palpable circumscribed area of skin color change
 - C. Purpura – any skin eruption resulting from extravasated blood
 - D. Wheal – flakes of stratum corneum
302. Which of the following clinical manifestations of acute rheumatic fever is most common?
- A. Carditis
 - B. Erythema marginatum
 - C. Migratory polyarthrititis
 - D. Subcutaneous nodules
303. A 4-year-old Haitian refugee presents with chills, fatigue, and abdominal pain; temperature is 40.2°C (104.36°F). He appears acutely ill and fatigued. He is tachycardic and tachypneic with hepatomegaly; there is no rash or indication of joint pain. Liver enzyme test results include the following: total bilirubin, 4.9 mg/dL; ALT, 247 units/L; and AST, 236 units/L. Right upper quadrant ultrasonography demonstrates a large liver, with patent ducts, and without abscess. Which of the following would most likely confirm the diagnosis?
- A. Blood smear
 - B. Leptospiral microscopic agglutination test
 - C. Stool examination for ova and parasites
 - D. Viral hepatitis panel

304. A 25-year-old woman at 34 weeks' gestation presents with vaginal bleeding. Physical examination reveals no uterine tenderness and normal vital signs. The primary focus of ordering a transabdominal ultrasound examination is to rule out:
- A. Cervical effacement
 - B. Placenta previa
 - C. Placental abruption
 - D. Uterine rupture
305. In a patient with back pain and a suspected lumbar herniated disc:
- A. Bed rest and pain control resolve most patients' symptoms within a month
 - B. Patients have earlier relief of pain with surgical discectomy
 - C. Radiographs are indicated for patients with a mechanism of heavy lifting
 - D. Steroid treatment reduces the need for surgical repair
306. The development of biphasic defibrillators affected intervention in ventricular fibrillation by:
- A. Decreasing first shock success rates
 - B. Decreasing the number of shocks needed to defibrillate
 - C. Increasing the current applied to the myocardium
 - D. Increasing the effect of electrical current on cardiac myocytes

307. The chest radiograph in Figure 51 suggests a diagnosis of:
- A. Esophageal rupture
 - B. Pneumonia
 - C. T-cell lymphoma
 - D. Tuberculosis

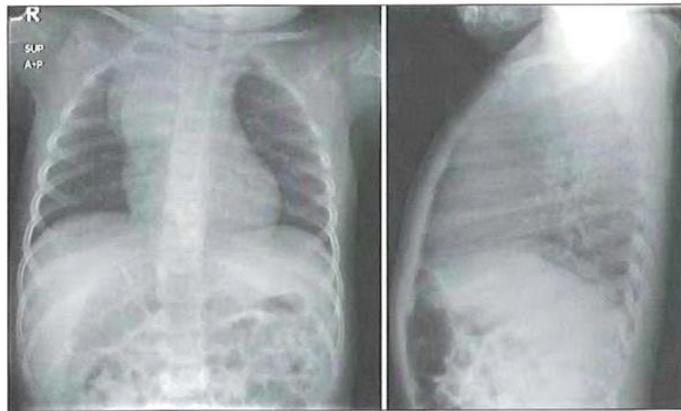


Figure 51

308. A 22-year-old woman is brought in with neck pain after diving head-first into a swimming pool. A CT scan of the cervical spine reveals a wedge-shaped fragment off of the inferior, anterior aspect of C5. No other abnormalities are identified. The patient has no other injuries and has a normal neurologic examination. Which of the following management strategies is most appropriate?
- A. Admit to the hospital for surgery
 - B. Discharge in a hard cervical collar with pain medication and instructions to follow up with a spine surgeon in 1 week
 - C. Obtain flexion-extension cervical spine radiographs and admit to the hospital for pain control
 - D. Obtain flexion-extension cervical spine radiographs, and, if normal, discharge with pain medication and instructions to follow up with a spine surgeon in 1 week

309. Which of the following is the most common presenting feature among infants with congenital hypertrophic pyloric stenosis diagnosed in the emergency department?
 - A. Direct hyperbilirubinemia
 - B. Dysmorphic features
 - C. Metabolic alkalosis
 - D. Nonbilious vomiting

310. An obese young woman presents with a 1-month history of vomiting and dull headaches that are typically worse in the morning. Urine pregnancy test result is negative. Which of the following studies is likely to be diagnostic?
 - A. Abdominal CT scan
 - B. Abdominal series
 - C. Lumbar puncture
 - D. Pelvic ultrasound examination

311. A 53-year-old man undergoing radiation treatment for prostate cancer presents with bloody diarrhea, tenesmus, and occasional stool incontinence of 3 days' duration. Vital signs include blood pressure 130/82, pulse 82, and temperature 37°C (98.6°F). The abdomen is soft. Rectal examination produces diffuse tenderness, good tone, and bright red blood. Lower extremity strength, reflexes, and sensation are normal. Which of the following is the best management plan?
 - A. Analgesics and sucralfate
 - B. Empiric ceftriaxone, doxycycline, and acyclovir
 - C. Oral steroids and mesalamine
 - D. Surgical consultation for incision and drainage

312. A 55-year-old woman presents with shortness of breath that has worsened over the past several weeks and is worse during exertion and at night. Which of the following clusters of radiographic findings is most characteristic of cardiogenic pulmonary edema?
 - A. Cardiomegaly, Kerley B lines, and pulmonary venous redistribution
 - B. Cephalization, Kerley A lines, and widened mediastinum
 - C. Hampton hump, fluid in the minor fissure, and bat-wing infiltrates
 - D. Interstitial infiltrates, pleural effusion, and Westermark sign

313. A patient who is taking linezolid presents with symptoms of an upper respiratory tract infection. Which of the following agents should the patient avoid?
- A. Benzonatate
 - B. Chlorpheniramine
 - C. Diphenhydramine
 - D. Pseudoephedrine
314. Regarding a diagnostic test with a reported specificity of 50% and a sensitivity of 93%, which of the following statements is correct?
- A. It could be helpful in identifying a rare condition
 - B. It will have few false-negative results
 - C. The overall accuracy is dependent on the disease prevalence
 - D. The results make no change in the post-test probability of disease
315. Which of the following statements regarding epistaxis is correct?
- A. Direct pressure is usually sufficient to control posterior nose bleeds
 - B. Nasal packing requires prophylaxis with ciprofloxacin 500 mg twice daily
 - C. Oxymetazoline applied by aerosol significantly reduces bleeding
 - D. Severe, life-threatening bleeds usually originate from the Kiesselbach plexus
316. A 74-year-old man presents with testicular pain of several days' duration that has gradually worsened. On examination, the testes are tender, and the scrotum appears normal. There is no penile discharge. What is the appropriate treatment?
- A. Ceftriaxone
 - B. Cephalexin
 - C. Doxycycline
 - D. Levofloxacin

317. A 42-year-old man presents after a motor vehicle crash in which he was the unrestrained driver. He has shortness of breath and pain and crepitance on the right side of his chest. In the ambulance, he became tachycardic, tachypneic, and hypotensive. Symmetrical breath sounds are noted. What is the appropriate next step?
 - A. Order chest radiography
 - B. Perform needle decompression of the chest
 - C. Set up for a tube thoracostomy
 - D. Start normal saline 1 L bolus IV

318. Which of the following chest radiograph views is most sensitive for a small pleural effusion?
 - A. End expiratory
 - B. Lateral decubitus
 - C. Supine AP
 - D. Upright PA

319. A 22-year-old man presents with a painful, swollen jaw. He was involved in a fistfight the night before. Visual inspection of the teeth reveals malalignment and intraoral clotted blood between the right first and second molars. He cannot bite down forcefully onto a tongue blade on the right side. Which of the following management strategies is most appropriate?
 - A. CT scan, pain control, discharge, and outpatient oral surgery consultation in 24 hours
 - B. Dental consultation in the emergency department, CT scan, and discharge with pain medication and instructions for outpatient followup
 - C. Pain control, intravenous penicillin, and admission to the hospital with oral surgery consultation
 - D. Panoramic radiographs, pain control, oral penicillin, discharge, and outpatient oral surgery consultation in 24 hours

320. A 74-year-old man presents with weakness. His wife says that he is otherwise healthy but has had a cold for the past 3 days. Laboratory test results include the following: serum sodium level, 152 mEq/L; BUN, 38 mg/dL; and creatinine, 1.6 mg/dL. Which of the following is the most likely etiology of the hypernatremia?
 - A. Iatrogenic sodium administration
 - B. Impaired renal concentrating ability
 - C. Impaired thirst drive
 - D. Loss of water in excess of sodium

321. A 43-year-old man presents after one episode of bloody emesis. He first had multiple episodes of forceful vomiting and diarrhea after eating at a new Chinese restaurant. He has had no further emesis and otherwise appears well, and he has no significant past medical history. What is the most likely diagnosis?
- A. Boerhaave syndrome
 - B. Esophageal varices
 - C. Gastritis
 - D. Mallory-Weiss syndrome
322. A 68-year-old man presents with acute shortness of breath and lightheadedness. He denies chest pain and other medical problems but has a history of hypertension. Vital signs include blood pressure 85/50, pulse 120, respirations 36, and oxygen saturation 93% on room air. He is able to speak five-word sentences. Examination reveals that his skin is poorly perfused, his lungs are clear, his heart sounds are regular without murmurs, and he has no peripheral edema. An ECG reveals ST-segment depression in the lateral leads. What is the next best treatment step?
- A. Intravenous digitalis
 - B. Intravenous dobutamine
 - C. Small bolus of normal saline
 - D. Sublingual nitroglycerin
323. A 3-week-old girl is brought in for evaluation of sudden-onset explosive, bloody diarrhea. She has a history of poor weight gain and infrequent stool production. On physical examination, she is not jaundiced but has fever, abdominal distention, and signs of dehydration. She cries weakly when the abdomen is palpated. Rectal examination reveals an empty vault, but, at the end of the examination, she has another episode of explosive diarrhea. Which of the following should be included in the management of her condition?
- A. Abdominal ultrasonography
 - B. Esophagogastroduodenoscopy
 - C. Exchange transfusion
 - D. Rectal decompression

324. Which of the following statements regarding myxedema coma is correct?
 - A. Active rewarming can precipitate hypotension
 - B. Hyperglycemia is common
 - C. Hyponatremia is common
 - D. Intravenous T4 administration has been associated with sudden death

325. For patients developing either severe high-altitude pulmonary edema or severe high-altitude cerebral edema, what is the most beneficial definitive treatment?
 - A. Acetazolamide
 - B. Descent
 - C. Furosemide
 - D. Portable hyperbaric oxygen chamber

326. A patient known to have advanced HIV infection presents following a seizure. He has had headache, fever, and altered mental status for 2 weeks. A contrast-enhanced head CT scan shows multiple ring-enhancing lesions. Which of the following therapies is most likely indicated?
 - A. Four-drug antituberculosis therapy
 - B. Intravenous gancyclovir
 - C. Liposomal amphotericin B
 - D. Pyrimethamine and sulfadiazine plus folinic acid

327. A 33-year-old woman at 36 weeks' gestation presents with abdominal contractions. She says that her water broke at home 30 minutes earlier. Sterile speculum examination reveals a pool of fluid with positive nitrazine and ferning of the fluid. She is having contractions every 3 minutes, and the cervix is dilated to 2 cm. Ultrasound examination reveals vertex fetal presentation. Which of the following is the best management plan?
 - A. Administer betamethasone
 - B. Administer oxytocin
 - C. Administer terbutaline
 - D. Expectant management

328. What is the most common cause of death in advanced Parkinson disease?
 - A. Drug toxicity
 - B. Respiratory failure
 - C. Suicide
 - D. Trauma-related injury

329. What is the most common clinical scenario in which truly emergent pericardiocentesis is required?
 - A. Penetrating trauma to the anterior chest
 - B. Penetration of the heart during central line placement
 - C. Pulseless electrical activity
 - D. Renal failure and pericardial effusion

330. Which of the following illnesses does hantavirus most commonly cause?
 - A. Encephalitis
 - B. Flulike illness
 - C. Hepatitis
 - D. Myocarditis

331. Which of the following combinations of findings is most consistent with intraperitoneal bladder rupture?
 - A. Blood at the urethral meatus, high-riding prostate, inability to void
 - B. Blunt abdominal trauma, dome rupture, gross hematuria
 - C. Microscopic hematuria, pelvic fracture, bladder laceration
 - D. Perineal hematoma, gross hematuria, dysuria

332. Which of the following statements regarding a patient with fever is correct?
 - A. Bradycardia with a fever can occur in Lyme disease
 - B. Chills occur in response to a declining body temperature
 - C. Heart rate increases by 30 beats/min for each 0.55°C rise in temperature
 - D. Rectal temperatures are typically 2°C higher than oral temperatures

333. A 49-year-old man presents with severe, persistent chest pain after one episode of nonbloody emesis. He is diaphoretic and says that the pain gets worse when he swallows. A chest radiograph is obtained (Figure 52). After initial resuscitation, which of the following is the appropriate next step toward definitive treatment?
- A. CT angiogram of the chest
 - B. Emergent surgery consultation
 - C. Endoscopy
 - D. Esophagram

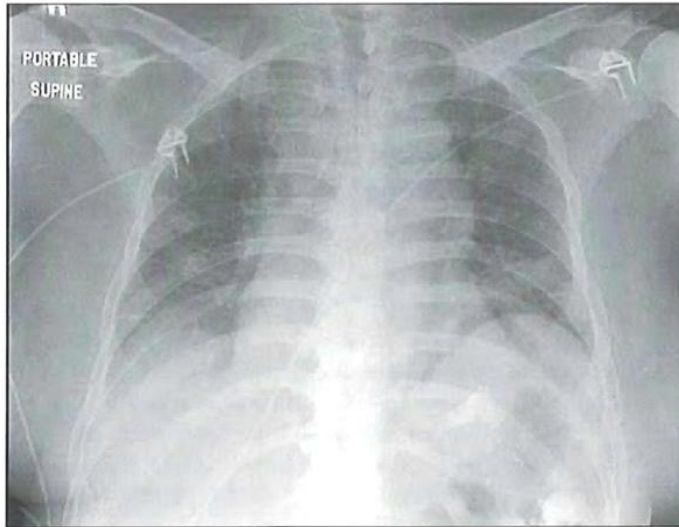


Figure 52

334. Which of the following antihypertensive agents is paired with the appropriate indication?
- A. ACE inhibitors – hypertension in pregnancy
 - B. Beta-blockers – acute MI
 - C. Beta-blockers – hypertension in cocaine toxicity
 - D. Short-acting dihydropyridine calcium-channel blockers – acute MI
335. The correct antidote for cyanide poisoning is:
- A. Hydroxocobalamin
 - B. Pyridoxine
 - C. Thiamine
 - D. Vitamin K
336. In which of the following scenarios is parental consent required before treating the patient?
- A. 14-year-old with a facial laceration after an assault
 - B. 15-year-old who thinks she has a sexually transmitted disease
 - C. 16-year-old with a finger laceration who is living independently of his parents
 - D. 17-year-old with a boxer fracture who is in the Army
337. Which of the following techniques for removing a foreign body from a toddler's nose can likely be accomplished without restraint or sedation?
- A. Insertion of a deflated balloon catheter then inflation when beyond the foreign body
 - B. Parent-applied mouth-to-mouth blowing
 - C. Removal with a probe with cyanoacrylate glue on the tip
 - D. Removal with alligator forceps

338. What is the appropriate management strategy for a pregnant patient who presents with colicky right flank pain and hematuria with RBCs 500/hpf and WBCs 400/hpf and the sonographic findings in Figure 53?
- A. Admit with urology consultation
 - B. Discharge after hydration and pain management
 - C. Discharge with gynecology consultation
 - D. Observe only



Figure 53

339. A 3-year-old boy with a history of chiari malformation and ventriculoperitoneal shunt placement is brought in by his mother because he has had intermittent headache, nausea, vomiting, and abdominal pain for 4 days. His siblings have recently been ill with influenza A. On examination, the child is irritable. He is afebrile, and there are no external signs of infection around the catheter. The chamber is easily compressible, and refill time is less than 3 seconds. What are the appropriate next steps?
- A. Order head CT, shunt series, and shunt tap
 - B. Treat with acetazolamide to decrease CSF production
 - C. Treat with antiemetics and rehydration and attempt to feed
 - D. Treat with oseltamivir and discharge with instructions to follow up with pediatrician

340. Which of the following statements regarding myocarditis in children is correct?
- A. Beta-blockers are the mainstay of treatment for children with myocarditis and dysrhythmias
 - B. Erythrocyte sedimentation rate differentiates myocarditis from other etiologies
 - C. In children with myocarditis, an ECG reveals high voltage in the precordial leads
 - D. Myocarditis can present with difficulty breathing, retractions, and wheezing as the dominant features
341. A man stumbles into the emergency department stating that his girlfriend, in a fit of anger, sprayed him with an unknown chemical. He is coughing violently and appears to be covered in a fine, dry powder. After applying personal protective equipment, what is the appropriate next step?
- A. Brush the powder off the patient's skin
 - B. Remove all of the patient's clothing
 - C. Start an albuterol breathing treatment
 - D. Wash the patient with water
342. Which of the following causative organisms of pneumonia is also associated with rash and bullous myringitis?
- A. *Bordetella pertussis*
 - B. *Legionella pneumophila*
 - C. *Mycoplasma pneumoniae*
 - D. *Yersinia pestis*
343. Which of the following statements regarding laryngeal trauma is correct?
- A. Calcification of the laryngeal cartilages is incomplete in pediatric patients
 - B. CT is equally reliable in adult and pediatric patients
 - C. Immediate airway compromise is a distinguishing feature
 - D. Pain with tongue movement localizes trauma to the larynx

344. Which of the following clinical features is more likely to be seen in an elderly patient with dehydration than in a pediatric patient?
- A. Dry mucus membranes
 - B. Postural hypotension
 - C. Reduced skin turgor
 - D. Sunken eyes
345. A 42-year-old woman with a history of a hiatal hernia and chronic gastric reflux symptoms presents with sudden-onset left upper quadrant abdominal pain and retching. Vital signs include blood pressure 86/40, pulse 121, temperature 37°C (98.6°F), and oxygen saturation 98% on room air. The upper abdomen is mildly distended, and breath sounds are decreased in the left lower lobe of the lungs. The nurse is unable to pass a nasogastric tube. Laboratory test results include the following: lactate, 8 mg/dL; pH, 7.13; and Hgb, 12 g/dL. Chest radiographs reveal a distended stomach above the diaphragm. After appropriate fluid resuscitation, which of the following should be initiated in the emergency department?
- A. Broad-spectrum antibiotics
 - B. Endoscopy
 - C. Packed red blood cells
 - D. Sodium bicarbonate
346. Which of the following pairings of murmur and underlying cause is correct?
- A. Diastolic murmur that radiates to the carotid – mitral regurgitation
 - B. Short, soft diastolic murmur – aortic regurgitation
 - C. Systolic murmur that radiates to the axilla – aortic stenosis
 - D. Systolic murmur that radiates to the axilla – mitral stenosis

347. A 40-year-old man presents unable to walk after a bowl game party. Physical examination is normal except for a flaccid paralysis of his legs. The cardiac monitor reveals the rhythm in Figure 54. He has a family history of this problem. Which of the following is the most appropriate treatment?
- Calcium gluconate
 - Magnesium sulfate
 - Potassium chloride
 - Thyroxine

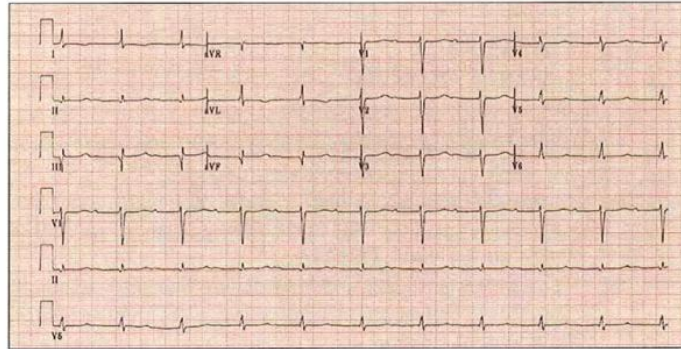


Figure 54

348. Which of the following statements regarding the management of frostbite is correct?
- Hyperbaric oxygen therapy is indicated if gangrene develops
 - Rewarming of the part should begin in the field regardless of the risk of refreezing
 - Rewarming of the part should continue despite painful sensation
 - The bleeding coagulopathy of hypothermia prevents thrombotic injury
349. Which of the following statements regarding ehrlichiosis is correct?
- Causative agent is *Borrelia burgdorferi*
 - Commonly associated with leukopenia
 - Transmitted by the bite of the *Anopheles* mosquito
 - Treatment of choice is penicillin

350. An 18-year-old woman presents with abdominal pain and a foul-smelling, bloody vaginal discharge 6 days after an uncomplicated cesarean delivery. Physical examination reveals significant lower abdominal pain with uterine and adnexal tenderness. Surgical incision is clean, dry, and intact with no evidence of dehiscence. Both breasts are mildly swollen with minimal tenderness, but no warmth is noted. Vital signs are significant for pulse of 110 and a temperature of 39°C (102.2°F). Which of the following diagnoses best explains the cause of the fever?
 - A. Endometritis
 - B. Mastitis
 - C. Pyelonephritis
 - D. Retained uterine packing

351. For which of the following patients is intravenous thrombolytic therapy for ischemic stroke the appropriate next step?
 - A. 45-year-old man with a history of cirrhosis, symptom onset 120 minutes earlier; platelet count 75,000/mcL, blood pressure 175/90, NIH stroke scale score 24, head CT negative
 - B. 45-year-old woman with sudden-onset headache with seizure, symptom onset 90 minutes earlier; blood pressure 160/90, NIH stroke scale score 18, head CT negative
 - C. 60-year-old man with a history of hypertension on atenolol, symptom onset 60 minutes earlier; blood pressure 210/170, NIH stroke scale score 15, head CT negative
 - D. 60-year-old woman with a history of brain tumor and resection 6 months earlier, symptom onset 90 minutes earlier; blood pressure 175/90, NIH stroke scale score 18, head CT negative

352. The Milch technique for reducing a shoulder dislocation involves which of the following combinations of movements of the affected arm?
 - A. Abduction and external rotation
 - B. Downward force and internal rotation
 - C. External rotation of the adducted arm
 - D. Traction and limited external rotation

353. A patient presents with fever, cough, and currant-jelly sputum. Chest radiography reveals a lobar pneumonia with a bulging fissure. What causative organism is associated with these findings in pneumonia?
- A. *Haemophilus influenzae*
 - B. *Klebsiella pneumoniae*
 - C. *Mycoplasma pneumoniae*
 - D. *Streptococcus pneumoniae*
354. Which of the following statements regarding penetrating neck trauma is correct?
- A. Angiography is not typically needed for zone 3 vascular injuries
 - B. Duplex ultrasonography has replaced angiography in the evaluation of zone 1 vascular injuries
 - C. The carotid artery is the most frequently injured vessel in the neck
 - D. The most common cause of immediate death is exsanguination
355. Which of the following systemic disorders is associated with pruritus?
- A. Chronic kidney disease
 - B. Glucocorticoid deficiency
 - C. Heart failure
 - D. Mineralocorticoid deficiency
356. A 3-year-old boy is brought in by his mother for evaluation of facial swelling. She says he has been progressively more tired over the past few days, has eaten less than usual, and has had a stomach ache. Vital signs are blood pressure 100/56, pulse 110, respirations 20, temperature 37°C (98.6°F), and oxygen saturation 98%. On physical examination, he is awake and alert with very mild tachycardia. He has appreciable swelling of the face, hands, and feet. Laboratory evaluation reveals: Hgb, 15.5 g/dL; BUN, 9 mg/dL; creatinine, 0.5 mg/dL; serum albumin, 1.8 g/dL. Urinalysis reveals an elevated protein level but is otherwise normal. Which of the following is the best management strategy for this patient?
- A. Admission to a basic pediatric unit for the initiation of corticosteroid therapy
 - B. Admission to an ICU for invasive blood pressure monitoring
 - C. Diuresis with furosemide in the emergency department followed by discharge home
 - D. Emergent hemodialysis in the emergency department followed by admission

357. What is the most common cause of esophageal perforation in the United States?
- A. Boerhaave syndrome
 - B. Chemical ingestion
 - C. Esophageal endoscopy
 - D. Foreign body ingestion
358. Which of the following dysrhythmias is associated with commotio cordis?
- A. Asystole
 - B. Atrial fibrillation
 - C. Pulseless electrical activity
 - D. Ventricular fibrillation
359. Which of the following agents is most appropriate to treat convulsions associated with a tricyclic antidepressant poisoning?
- A. Flumazenil
 - B. Lorazepam
 - C. Physostigmine
 - D. Sodium bicarbonate
360. According to federal law, the medical screening examination must include:
- A. Arrangements for specialist outpatient followup care
 - B. Documentation of insurance and medical information
 - C. Evaluation by the triage nurse
 - D. Examination for an emergency medical condition

361. Which of the following statements describes the proper approach to performing an inferior alveolar nerve block?
- A. Approach the nerve from the contralateral side of the mouth (approximate 30-degree angle), about 1 cm above the occlusive surface of the teeth and parallel to the teeth, and advance the needle until it is in direct contact with the inferior alveolar nerve, as confirmed by patient sensation
 - B. Approach the nerve from the contralateral side of the mouth (approximate 30-degree angle), about 1 cm above the occlusive surface of the teeth and parallel to the teeth, and advance the needle until it is in direct contact with the mandible
 - C. Approach the nerve from the ipsilateral side of the mouth, 1 cm above the occlusive surface of the teeth and parallel to the teeth, and advance the needle posteriorly until resistance is met
 - D. Approach the nerve from the ipsilateral side of the mouth, angling upward at a 30-degree angle, aiming for the lateral edge of the hard palate, 1.5 to 2 cm above the occlusive surface, and advance the needle and infuse the anesthetic agent
362. A 33-year-old woman at 30 weeks' gestation is brought in by ambulance for severe chest pain. While in the emergency department, she becomes pulseless, and ventricular fibrillation is noted on the cardiac monitor. Chest compressions are started, and defibrillation is attempted twice without success. After 5 minutes of resuscitation efforts, there is still no maternal pulse. What is the next best step in management?
- A. Administer magnesium
 - B. Intubate the patient
 - C. Perform perimortem cesarean delivery
 - D. Perform thoracotomy

363. A 25-year-old man presents with low back pain that has gotten worse over the past week. He is HIV positive. Vital signs are blood pressure 84/58, pulse 110, respirations 20, and temperature 38.9°C (102°F). Neurologic examination is unremarkable. An MRI is obtained (Figure 55). What is the appropriate next step?
- A. Obtain culture using CT-guided needle aspiration to guide antibiotic choice
 - B. Obtain culture using fluoroscopy-guided lumbar puncture to guide antibiotic choice
 - C. Request neurology consultation for urgent electromyography
 - D. Request neurosurgery consultation for urgent laminectomy and start cefepime and vancomycin



Figure 55

364. Placement of a magnet over an automated implantable cardioverter-defibrillator, or AICD:
 - A. Causes the internal defibrillator of the AICD to fire automatically
 - B. Causes the same response regardless of manufacturer, model, and mode of operation
 - C. Should be the first response in a patient with an AICD who presents in ventricular fibrillation
 - D. Temporarily stops the AICD response to a tachydysrhythmia

365. A patient who recently had an upper respiratory viral syndrome now presents with pneumonia and a cavitary lesion on chest radiograph. Which of the following antibiotic choices provides adequate coverage for the likely organisms?
 - A. Ampicillin and gentamicin
 - B. Ceftriaxone and azithromycin
 - C. Isoniazid, rifampicin, and ethambutol
 - D. Vancomycin and levofloxacin

366. Which of the following materials is most damaging in penetrating intraocular injury?
 - A. Glass
 - B. Lead
 - C. Plastic
 - D. Wood

367. In the evaluation of a patient with tinnitus, which of the following findings suggests a benign etiology?
 - A. Bruit in lower neck
 - B. Facial nerve weakness
 - C. Nystagmus
 - D. Pulsatile nature

368. A 68-year-old woman presents with nausea and right upper quadrant abdominal pain of 8 hours' duration. She is afebrile, and the CBC count and total bilirubin levels are normal. A bedside ultrasound examination is performed (Figure 56). What is the appropriate next step?
- A. Arrange for endoscopic retrograde cholangiopancreatography
 - B. Discharge with surgery referral for cholecystectomy
 - C. Order a hepatobiliary iminodiacetic acid scan
 - D. Start intravenous antibiotics and obtain a surgery consultation

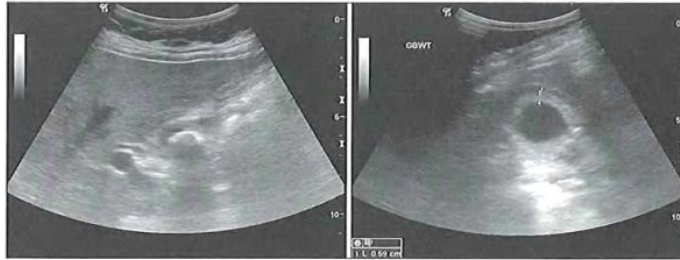


Figure 56

369. A 35-year-old man presents after his wife says that he passed out while watching television. He has no past medical history and is currently asymptomatic. Vital signs are within normal limits, and physical examination findings are completely normal. An ECG is obtained (Figure 57). Which of the following is the most appropriate next step in management?
- A. Activate the cardiac catheterization laboratory, administer aspirin and heparin
 - B. Admit the patient for cardiac monitoring and consultation for defibrillator placement
 - C. Obtain neurology consultation for possible seizure disorder
 - D. Send cardiac markers and obtain echocardiography

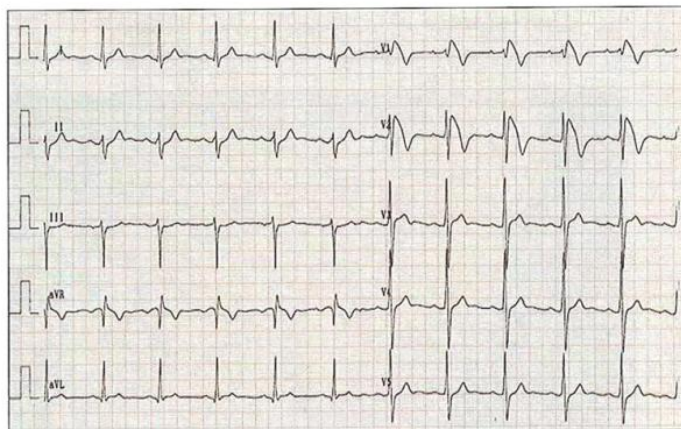


Figure 57

370. Which of the following statements regarding the hyperosmolar hyperglycemic state is correct?
- A. Fluid deficits are usually mild
 - B. Mortality rate is higher than that for diabetic ketoacidosis
 - C. Most patients present in a coma
 - D. Onset is more sudden than that of diabetic ketoacidosis

371. In the acute management of severe hypothermia:
- A. ABG analysis should not be temperature corrected prior to interpretation
 - B. Cardioversion of new-onset atrial fibrillation improves oxygenation and rewarming
 - C. Insulin administration improves outcomes in hyperglycemic patients
 - D. Lack of corneal reflexes is a reliable predictor of death
372. A 28-year-old woman returns from a camping trip in Wisconsin with a rash as shown in Figure 58. Left untreated, what is the most likely complication?
- A. Bilateral facial palsy and atrioventricular block
 - B. Progressive cellulitis leading to regional suppurative lymphadenopathy
 - C. Rapid progression to overwhelming sepsis and death
 - D. Relapsing fever alternating with apparent remission for days at a time



Figure 58

373. Which of the following is the defining triad of hemolytic uremic syndrome?
- A. Abdominal distention, headache, hypertension
 - B. Abdominal pain, purpura, swollen joints
 - C. Anemia, high creatinine, low platelets
 - D. Cyanosis, low back pain, vomiting
374. Which of the following findings is most likely with a uterine fibroid?
- A. Amenorrhea
 - B. Menorrhagia
 - C. Multiparity
 - D. Severe pain
375. Which of the following medications can relieve the symptoms of postherpetic neuralgia once it has developed?
- A. Intramuscular lidocaine
 - B. Oral acyclovir
 - C. Oral gabapentin
 - D. Topical hydrocortisone
376. Which of the following statements regarding the removal of a rust ring from the cornea is correct?
- A. Iron oxidation over 1 to 2 days kills surrounding epithelial cells and allows the ring to be removed in one piece
 - B. Ring does not form for 12 to 24 hours following the deposition of a metallic corneal foreign body
 - C. Rotating burrs cause significant corneal injury and should not be used in the emergency department
 - D. Size of the ring has minimal impact on corneal healing
377. Which lobe of the lung is most likely to be affected in aspiration of a foreign body?
- A. Left lower
 - B. Left upper
 - C. Right lower
 - D. Right upper

378. Which of the following injuries can be safely repaired by an emergency physician?
- A. 0.5-cm lower eyelid laceration at the medial canthus
 - B. 1-cm horizontal upper eyelid laceration with a small area of exposed fat
 - C. Lower eyelid laceration with a small area of avulsed tissue
 - D. Oblique, partial-thickness laceration of the upper eyelid
379. Which of the following is a risk factor for the development of cellulitis?
- A. Arterial insufficiency
 - B. History of cancer
 - C. Lymphedema
 - D. Tobacco use
380. A 58-year-old woman with a history of cholelithiasis presents with epigastric abdominal pain, nausea, vomiting, and shortness of breath. She is obese and diaphoretic with diffuse inspiratory crackles. Her current vital signs are blood pressure 80/40, pulse 135, respirations 45, temperature 37.2°C (99°F), and oxygen saturation 70% on room air. Lipase level is 3,000 units/L. What is the appropriate next step?
- A. Abdominal ultrasonography
 - B. CT
 - C. Emergent cholecystectomy
 - D. Intubation

381. A 50-year-old woman with an ST-segment elevation MI is being prepared for transport to the cardiac catheterization laboratory. Aspirin has been given, a heparin drip has been started, and a portable cardiac monitoring device is attached. Vital signs are stable and within normal limits, and there are no findings of heart failure, but she is still experiencing chest pain. A rhythm strip is obtained (Figure 59). What is the most appropriate next step?
- Delay transport to administer an amiodarone drip
 - Delay transport to administer atropine and monitor the effects
 - Do not delay transport
 - Do not delay transport but prepare for possible transvenous pacemaker placement

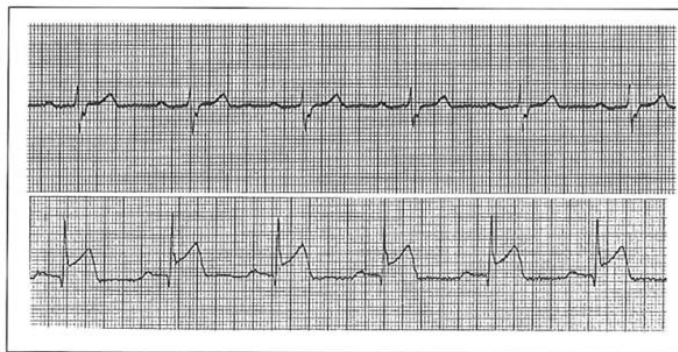


Figure 59

382. A patient presents with tachycardia, mild hyperthermia, dry skin, delirium, and mydriasis after drinking a tea made from a plant. Which of the following plants was most likely used?
- Dieffenbachia*
 - Jimsonweed
 - Nicotiana tabacum*
 - Oleander
383. Which of the following illnesses or events must be reported to local public health authorities in all 50 states?
- Alcohol-related motor vehicle crash
 - Animal bite
 - Child abuse
 - Pediatric near-drowning

384. A 23-year-old man presents with a sore throat and fever. He is an immigrant and has had no medical care in the past. Physical examination reveals drooling, stridor, right neck mass, and marked edema to the floor of the mouth, causing tongue elevation. Respirations are labored at a rate of 28. What is the appropriate next step?
- A. Draw two sets of blood samples for culture and start intravenous cefazolin
 - B. Notify operating room staff and prepare for a surgical airway
 - C. Order noncontrast CT of the face and neck
 - D. Perform an incision and drainage of the neck abscess
385. Which of the following signs or symptoms should raise suspicion for the diagnosis of encephalitis over that of meningitis?
- A. Altered mental status
 - B. Fever
 - C. Focal seizure
 - D. Headache
386. Which of the following wounds can be appropriately managed with primary closure at the time of emergency department presentation?
- A. Deep laceration to the bottom of the foot
 - B. Dog bite to the face
 - C. Heavily contaminated wound
 - D. Human bite wound to the palm
387. In a previously healthy patient with severe pneumonia who is awaiting admission to the ICU, which of the following antibiotic regimens should be started in the emergency department?
- A. Ampicillin-sulbactam and vancomycin
 - B. Azithromycin and levofloxacin
 - C. Ceftriaxone and levofloxacin
 - D. Ertapenem and vancomycin

388. A 30-year-old man presents with a stab wound to the left axilla. He has significant pain, and there is a firm swelling over the axilla and proximal medial humerus. Examination reveals a palpable thrill, decreased radial pulse, and blood pressure lower in the left arm than in the right. Neurologic examination is normal, and capillary refill is brisk. These findings are most consistent with:
- A. Arterial intimal tear
 - B. Arteriovenous fistula
 - C. Pseudoaneurysm
 - D. Transection of the axillary artery
389. In which of the following patients should urinary catheterization be avoided?
- A. 66-year-old man with hemoperitoneum
 - B. 72-year-old woman with neck of femur fracture
 - C. 75-year-old man in cardiogenic shock
 - D. 78-year-old woman with urinary tract infection
390. A mother brings in her 6-week-old daughter for evaluation of a cough. Birth history is normal. On physical examination, the baby appears normal, has normal oxygenation, and is breathing comfortably, but within minutes she has a paroxysm of violent coughing with cyanosis that spontaneously resolves within 1 minute. Which of the following is a recommended treatment for this condition?
- A. Intravenous erythromycin
 - B. Nebulized albuterol
 - C. Parenteral corticosteroids
 - D. Subcutaneous epinephrine
391. A 60-year-old man with a history of alcohol abuse presents with epigastric pain. Initial laboratory test results are as follows: WBCs, 20,000/mcL; blood glucose, 450 mg/dL; AST, 375 units/L; and lipase, 400 units/L. What is the appropriate disposition?
- A. General medical floor
 - B. ICU
 - C. Observation unit
 - D. Surgical floor

392. A 25-year-old man presents by ambulance following a 911 call. His girlfriend told the operator that he said his heart was racing then started acting "out of it." When paramedics arrived, he was hypotensive, and the cardiac monitor showed narrow-complex tachycardia. He was electrically cardioverted on scene to a sinus tachycardia. On examination, mental status and vital signs are normal. A 12-lead ECG is obtained (Figure 60). Which of the following statements regarding this cardiac condition is correct?
- A. Atrial fibrillation is the most common tachyarrhythmia associated with this condition
 - B. Electrical cardioversion should be used for a patient with this condition who presents with hemodynamically stable tachycardia
 - C. Procainamide should never be used for wide-complex tachycardias associated with this condition
 - D. When paroxysmal supraventricular tachycardia occurs with this condition in a stable patient, adenosine is an appropriate therapy

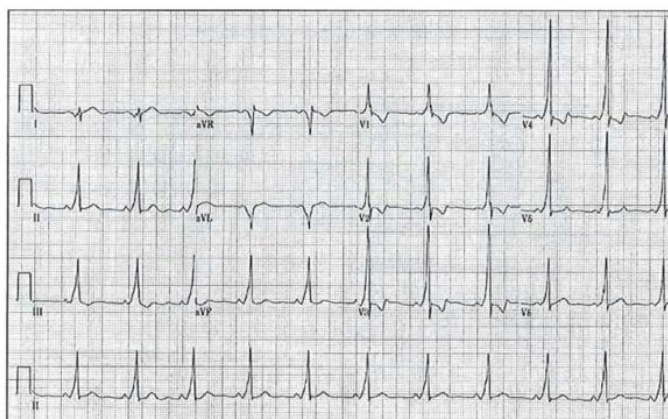


Figure 60

393. Which of the following antidepressants is most likely to cause QRS interval prolongation and convulsions in overdose?
- A. Fluoxetine
 - B. Sertraline
 - C. Trazodone
 - D. Venlafaxine

394. Which of the following components of a professional liability lawsuit must be proved in order for the plaintiff to prevail?
- A. Any causation
 - B. Breach of duty
 - C. Ethical misconduct
 - D. Negligence that could have led to injury or harm
395. A 4-year-old boy is brought in by his parents for treatment of fever and malaise. On examination, he has a maculopapular rash on his palms and soles that extends to his wrists and ankles. The family had been camping in the mountains of North Carolina. What is the preferred therapy for this condition?
- A. Chloramphenicol
 - B. Ciprofloxacin
 - C. Doxycycline
 - D. Tetracycline

396. A 34-year-old man is brought to the emergency department by his girlfriend following a seizure. She says that he had a sinus infection with headache and nausea and that he has been acting increasingly strange for the past 3 days. He has no significant past medical history. Vital signs are blood pressure 170/90, pulse 50, respirations 8, and temperature 38.7°C (101.7°F). On examination, the patient is obtunded and pupils are sluggish. A contrast-enhanced head CT is obtained (Figure 61). Which of the following statements regarding this patient's condition is correct?
- A. Between 30% and 50% of patients have long-term sequelae
 - B. Corticosteroids are contraindicated
 - C. Delayed surgical decompression after a 24-hour course of antibiotics is the preferred treatment
 - D. Recommended antibiotic choice is metronidazole plus vancomycin

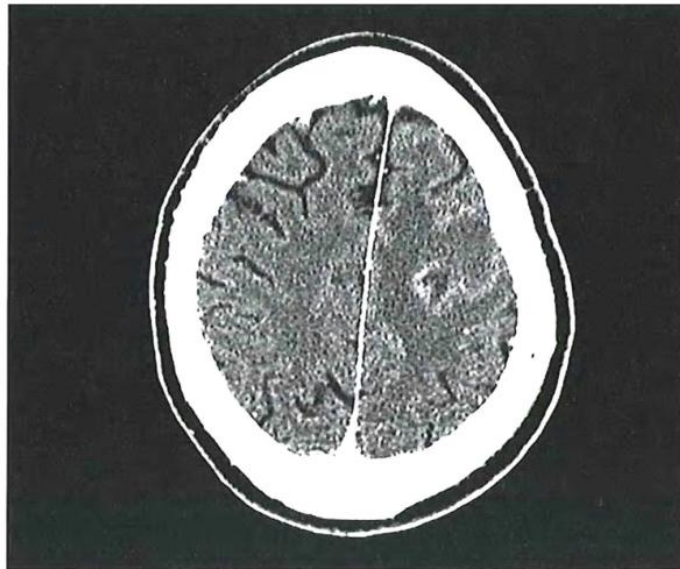


Figure 61

397. A 16-year-old boy presents with testicular pain of several hours' duration. Examination reveals scrotal edema and exquisite tenderness to the right testis. Which of the following statements regarding emergency department treatment is correct?
- A. Detorsion confirmed by relief of pain and restoration of blood flow on Doppler eliminates the need for surgical exploration
 - B. Even after successful detorsion, the testis is unlikely to return to its normal anatomic position
 - C. If one rotation of 180 degrees does not relieve the pain completely, further efforts at detorsion should be continued by rotating an additional turn
 - D. Testicular torsion occurs in a medial direction in the majority of cases, so detorsion is accomplished by rotating the right testis internally or clockwise
398. A 50-year-old woman presents complaining of a funny feeling in the back of her throat when she swallows; she thinks she has fish bone stuck in her throat. She has no respiratory distress or stridor, and her voice is normal. What is the next step in management?
- A. Barium swallow
 - B. Bronchoscopy
 - C. Discharge home
 - D. Plain radiographs
399. Which of the following findings is consistent with a second-degree sprain?
- A. Complete tearing of the ligament
 - B. Hemarthrosis
 - C. Joint instability
 - D. Painful range of motion
400. A 60-year-old man with a history of cirrhosis presents with abdominal pain and tense ascites. Paracentesis is performed, and the ascitic fluid granulocyte count is 275 cells/mm^3 . What is the appropriate next step?
- A. Discharge with a prescription for pain medications
 - B. Obtain surgery consultation
 - C. Start ceftriaxone
 - D. Wait for culture results

401. Which of the following statements regarding amiodarone is correct?
- A. Associated with pulmonary fibrosis when used as short-term intravenous therapy
 - B. Has never been shown to increase short-term survival to hospital admission in cardiac arrest patients
 - C. Not associated with hypotension
 - D. Recommended for ventricular fibrillation unresponsive to shock delivery, CPR, and vasopressor treatment
402. A 30-year-old woman presents 2 hours after ingesting an unknown quantity of aspirin. She has normal vital signs, no tinnitus, no acidosis, no measurable level of acetaminophen, and a serum salicylate concentration of 24 mg/dL. Which of the following is the appropriate management plan?
- A. Hemodialysis
 - B. Observation and measurement of serial salicylate concentrations
 - C. Urinary acidification
 - D. Use of the Rumack-Matthew nomogram to determine disposition
403. A 24-year-old man presents with pain and swelling under his left mandible. He reports increased pain and swelling when he tries to eat. His teeth appear normal; pharynx is visible and clear, but there is a tender, firm, mobile mass just inferior to the body of the left mandible. He denies weight loss and night sweats and does not smoke. What is the most likely diagnosis?
- A. Acute necrotizing ulcerative gingivitis
 - B. Ludwig angina
 - C. Lymphoma
 - D. Sialolithiasis
404. A 6-year-old boy with moderately severe facial trauma is brought to the emergency department by his mother. She says that she saw him "pitch" forward then fall face down on the ground and that he immediately stood up and appeared normal. What type of seizure did he have?
- A. Absence
 - B. Complex partial
 - C. Myoclonic atonic
 - D. Tonic-clonic

405. Which of the following statements regarding epistaxis and control of bleeding is correct?
- A. Blood seen exiting the nasolacrimal duct outside the eye following packing is an indication for immediate removal of packing
 - B. Most patients who are successfully treated with a posterior nasal pack may be discharged with followup in 2 to 3 days
 - C. Since a direct causal relationship exists between elevated blood pressure and epistaxis, blood pressure control should be accomplished first
 - D. The risk of sinusitis with short-term anterior nasal packing is minimal
406. A 7-month-old boy is brought in by paramedics actively seizing despite appropriate administration of benzodiazepines. He is afebrile and has no signs of trauma on examination. Which of the following diagnostic test results is the most important?
- A. ABG analysis
 - B. CSF analysis
 - C. Serum bicarbonate level measurement
 - D. Serum glucose level measurement
407. A 36-year-old man presents 40 minutes after sustaining a penetrating pinpoint injury to the volar aspect of his left middle finger from a paint gun. He is being examined with his supervisor present, as instructed by their employee manual. He has minimal pain and swelling in the injured finger. He declines pain medication and says he wants to go back to work. Which of the following management strategies is most appropriate?
- A. Admit him to the hospital
 - B. Allow him to return to work with instructions to follow up in 24 hours with the employee health facility
 - C. Excuse him from work with instructions to follow up with a hand surgeon in 24 hours
 - D. Place him on light duty for 1 week with instructions to follow up with his primary care physician in 3 to 5 days

408. An acutely poisoned patient presents with a severely depressed level of consciousness and tachypnea. Blood pressure and heart rate are normal. Blood gas analysis reveals a pH of 7.23, PCO_2 of 23 mm Hg, and a serum bicarbonate level of 10 mEq/L. Which of the following toxins is most consistent with this presentation?
- A. Ethylene glycol
 - B. Isopropyl alcohol
 - C. Phenobarbital
 - D. Salicylates
409. What is the cause of the rash in Figure 62?
- A. Herpes simplex
 - B. Rubeola
 - C. Varicella
 - D. Variola



Figure 62

410. In which of the following diseases does uveitis present as the most common extra-articular manifestation?
- A. Ankylosing spondylitis
 - B. Arthropathy of associated inflammatory bowel disease
 - C. Psoriatic arthritis
 - D. Systemic juvenile rheumatoid arthritis
411. Which of the following is recommended to prevent postdural puncture headache?
- A. Having the patient lie flat for 60 minutes after the procedure
 - B. Orienting the bevel of the needle toward the patient's head
 - C. Using a larger diameter needle
 - D. Using a pencil-point needle
412. A 32-year-old man presents with a soda bottle in his rectum. Which of the following statements regarding efforts to remove it is correct?
- A. If the postextraction examination is normal and there is no evidence of perforation, the patient may be discharged
 - B. Local anesthesia as a perianal block is contraindicated because of concern about infection
 - C. Rectal perforation is an indication for immediate removal in the emergency department
 - D. The vacuum created by the glass against the rectal wall makes it easier to remove
413. Which of the following is a contraindication to replantation of an upper extremity digit?
- A. Amputation between the distal and the proximal interphalangeal joints
 - B. Multiple digits
 - C. Multiple-level amputations
 - D. Thumb amputations
414. Which of the following statements regarding caustic ingestions is correct?
- A. Absence of oropharyngeal burns excludes the presence of esophagogastric burns
 - B. Acids cause liquefactive necrosis
 - C. Activated charcoal is generally contraindicated
 - D. Endoscopy is indicated regardless of symptoms

415. An 18-year-old man presents with a sore throat. He has an erythematous pharynx with enlarged tonsils and exudates, tender anterior cervical adenopathy, and no rash. His temperature is 38.4°C (101.1°F). He denies cough. According to the Centor criteria, what is the approximate likelihood that he will have a positive group A *Streptococcus* throat culture?
 - A. <5%
 - B. 15%
 - C. 55%
 - D. 85%

416. Which of the following statements regarding lumbar puncture results in subarachnoid hemorrhage is correct?
 - A. A 30% decrease in the RBC count from tube 1 to tube 4 suggests subarachnoid hemorrhage
 - B. A traumatic tap consistently produces more red blood cells in the CSF than subarachnoid hemorrhage does
 - C. An RBC count greater than 10,000/mcL is consistent with a radiographically detectable hemorrhage
 - D. CSF examination 1 hour after the event reliably shows xanthochromia

417. Which of the following findings is consistent with an ulnar collateral ligament injury?
 - A. Inability to abduct the thumb
 - B. No radiographic evidence of fracture
 - C. Pain with pinching and loss of pinch strength
 - D. Tenderness on the radial aspect of the metacarpophalangeal joint of the thumb

418. Hyperreflexia is expected in:
 - A. Hypermagnesemia
 - B. Hypothyroidism
 - C. Neuroleptic malignant syndrome
 - D. Serotonin syndrome

419. Which of the following pairings of antiretroviral medication and adverse reaction is correct?
 - A. Efavirenz – psychosis
 - B. Indinavir – lactic acidosis
 - C. Nelfinavir – urolithiasis
 - D. Ritonavir – hepatic failure

420. Which of the following is a risk factor for Achilles tendon rupture?
- A. Age younger than 40 years
 - B. Diabetes mellitus
 - C. Fluoroquinolone use
 - D. Hypertension
421. Seven people present with facial flushing and throbbing headache 25 minutes after eating tuna at a sushi restaurant. What is the most likely diagnosis?
- A. Allergic reaction
 - B. Ciguatera poisoning
 - C. Scombroid poisoning
 - D. Tetrodotoxin poisoning
422. A mother brings in her 3-week-old daughter because she noticed that one of her eyes is swollen and teary. The mother received prenatal care and had an uncomplicated, full-term pregnancy; the baby has been well since birth. Examination reveals mild tearing of the right eye. The patient has extraocular movement of the eye without apparent discomfort, and there is a brisk pupillary reaction to light. Vital signs are normal. What is the most likely diagnosis?
- A. Blepharitis
 - B. Conjunctivitis
 - C. Dacrocystitis
 - D. Hordeolum
423. A 64-year-old man with a history of hypertension, diverticulosis, and remote abdominal aortic aneurysm repair presents with a 2-day history of black stools, abdominal discomfort, and low-grade fever. He is diaphoretic. Vital signs include blood pressure 72/46, pulse 138, and respiratory rate 24. Physical examination reveals a midline abdominal scar, diffuse abdominal tenderness, and bright red blood in his rectum. Two large-bore intravenous lines are placed, and fluid resuscitation is begun. What is the appropriate next step in management?
- A. Obtain vascular surgery consultation
 - B. Order abdominal and pelvic CT scans and start intravenous antibiotics
 - C. Start nasogastric lavage and obtain endoscopy consultation
 - D. Start proton-pump inhibitor and octreotide infusion

424. Which of the following statements regarding repair of ear lacerations is correct?
- A. Anesthesia is best achieved by infiltrating the wound with lidocaine
 - B. Auricular cartilage lacerations should be covered but not sutured
 - C. Auricular cartilage lacerations should be repaired with nonabsorbable sutures
 - D. Evacuation of auricular hematoma is necessary because the cartilage is avascular
425. A 24-year-old woman presents with sudden left lower quadrant pain of 1 day's duration. Examination reveals moderate left lower quadrant tenderness with palpation and no rebound or guarding. Urine pregnancy test is negative. Transvaginal ultrasonography reveals a 4.5-cm unilocular cyst in the left ovary with good flow and a moderate amount of free fluid in the pouch of Douglas. Hemoglobin is 14.6 g/dL. Which of the following is the best management plan?
- A. Discharge with oral contraceptive pills and instructions to follow up with gynecologist
 - B. Obtain urgent gynecology consultation for possible surgery
 - C. Order abdominal and pelvic CT scans
 - D. Reassure and discharge with NSAIDs
426. A mother brings in her 2-year-old son 20 minutes after he swallowed household-strength bleach. The mother is frantic and not sure how much he ingested but guesses it was about a half cup. Appropriate disposition includes:
- A. Discharge home with reassurance
 - B. Observation in the emergency department for 6 hours
 - C. Oral activated charcoal
 - D. Whole bowel irrigation
427. A 45-year-old man presents with severe neck pain after falling onto his head from a scaffold. He is breathing spontaneously. He has sensation to the level of the clavicle, including his arms to his thumbs, but not below it. He can shrug his shoulders but cannot flex at the elbows or move his arms or legs. If this is a complete neurologic lesion, at what level is his spinal cord injury?
- A. C3
 - B. C5
 - C. C6
 - D. C8

428. A 68-year-old man presents with inability to void for 6 hours. He appears very uncomfortable, and the nurse is unable to pass the Foley catheter. Which of the following would be a contraindication to using a Coudé catheter instead?
- A. Age older than 65 years
 - B. Enlarged prostate
 - C. History of urethral strictures
 - D. Infection
429. According to the World Health Organization, what constitutes an influenza pandemic?
- A. Community-level outbreaks of a novel virus in at least two regions
 - B. Novel virus circulating among animals that is known to cause disease in humans
 - C. Sporadic cases of a reassorted human-animal virus in multiple communities throughout the world
 - D. Verified human-to-human transmission of a new animal virus causing an outbreak in a community
430. Which of the following statements regarding complications of anterior shoulder dislocations and reductions is correct?
- A. Avulsion fracture of the greater tuberosity of the humerus occurs in 10% to 15% of dislocations
 - B. Axillary nerve injury is assessed by testing sensation in the axilla
 - C. Bankart fracture is a compression fracture of the posterolateral humeral head
 - D. Hill-Sachs deformity refers to a fracture of the anterior glenoid rim

431. A 65-year-old man who smokes has several suspicious hepatic lesions as shown in Figure 63. Which of the following is the most likely etiology?
- A. Alcoholic hepatitis
 - B. Hepatitis C
 - C. Lung cancer
 - D. Primary biliary cirrhosis

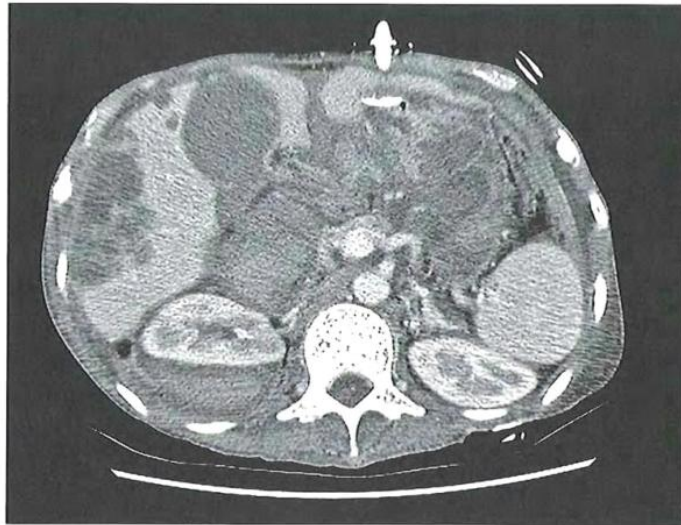


Figure 63

432. Which of the following is the appropriate sequence of events used when notifying family members of a death in the emergency department?
- A. Notification, grief response, preparation, viewing of the body, concluding process
 - B. Notification, preparation, viewing of the body, grief response, concluding process
 - C. Preparation, notification, grief response, viewing of the body, concluding process
 - D. Preparation, viewing of the body, notification, grief response, concluding process
433. Which of the following statements regarding closure of scalp lacerations is correct?
- A. Clamping a vessel is the best way to gain control of active bleeding
 - B. Complications of scalp wound infection include osteomyelitis and brain abscess
 - C. Hair should be shaved prior to suturing or stapling a scalp wound
 - D. Hair should not be washed for 24 to 48 hours after wound closure
434. An 18-year-old woman presents with fever 6 days after an uncomplicated cesarean delivery. On physical examination, both breasts are swollen and tender; there is increased warmth in a region over the left lateral breast with no fluctuance. Vital signs are significant for pulse of 110 and a temperature of 39°C (102.2°F). Which of the following treatments is most appropriate at this time?
- A. Discontinuation of breastfeeding
 - B. Incision and drainage
 - C. Oral dicloxacillin
 - D. Topical nystatin
435. Which of the following most reliably distinguishes erysipelas from other causes of skin infection?
- A. Associated abscess
 - B. Elevated advancing margin of infection
 - C. Patient's nontoxic appearance
 - D. Positive leading-edge aspiration culture results

436. A mother brings in her 5-day-old daughter for evaluation of sudden-onset, forceful, green-colored vomiting. The baby was born at term and at home by spontaneous vaginal delivery; she has no respiratory symptoms. Examination reveals a distended abdomen. Which of the following is the most likely diagnosis?
- A. Duodenal atresia
 - B. Malrotation with midgut volvulus
 - C. Necrotizing enterocolitis
 - D. Tracheoesophageal fistula
437. A 70-year-old woman presents with acute lower leg pain of 2 hours' duration. She denies any direct trauma. On examination, her right leg is pale and cold. Which of the following statements about the diagnosis is correct?
- A. An ankle-brachial index greater than 0.90 indicates peripheral arterial disease
 - B. CT angiography is the best diagnostic study
 - C. Decreased sensation is the first physical finding of this disease
 - D. Duplex ultrasound has a low sensitivity for identifying proximal arterial occlusion
438. A 64-year-old man with no significant past medical history presents 2 hours after being stung multiple times by bees. There are numerous urticarial lesions around the sting sites. He complains of headache, lightheadedness, nausea, and shortness of breath. His oxygen saturation on room air is 90%. Which of the following statements regarding management of this condition is correct?
- A. Antivenom should be given as soon as possible
 - B. Diphenhydramine is first-line therapy
 - C. Epinephrine 0.3 to 0.5 mg IM is appropriate pharmacotherapy
 - D. Immediate intravenous administration of steroids improves anaphylaxis
439. A mother brings in her 2-year-old son because he has been running a fever for 6 days. His vaccinations are up-to-date. Temperature is 38.6°C (101.5°F). Examination reveals a generalized nonvesicular rash, strawberry tongue, bilateral nonpurulent conjunctivitis, and cervical lymphadenopathy. Which of the following is seen as a side effect of the definitive treatment for this condition?
- A. High fever
 - B. Hyperglycemia
 - C. Hypotension
 - D. Reye syndrome

440. A 15-year-old boy presents with abdominal pain. He has been ill for 10 days with malaise, fever, and sore throat. Vital signs are blood pressure 110/80, pulse 76, respirations 16, and temperature 38.3°C (100.9°F). Physical examination is notable for exudative pharyngitis and an enlarged spleen. Which of the following statements regarding his signs and symptoms is most accurate?
- A. Fatigue resolves with pharyngitis symptoms
 - B. Petechiae of the palate is pathognomonic
 - C. Rash is often seen associated with these symptoms
 - D. Splenomegaly is common
441. Which of the following statements regarding suicide among adolescents is correct?
- A. A history of panic attacks does not increase the risk of attempted suicide
 - B. Belonging to the Goth subculture increases the risk of attempted suicide
 - C. Girls are more likely to complete a suicide
 - D. Suicide attempts are more common in boys
442. A 9-year-old boy with a 3-year history of asthma presents with wheezing and shortness of breath. His mother says that he was seen in the emergency department for the same complaint 3 days earlier. Vital signs are blood pressure 105/80, pulse 125, respirations 35, temperature 37.1°C (98.8°F), and oxygen saturation 89% on room air. Physical examination is notable for scalene muscle contractions, minimal air entry, and minimal inspiratory and expiratory wheezing. Which of the following statements regarding his condition and treatment is most accurate?
- A. Increased heart rate is not associated with decreased percentage of forced expiratory volume in 1 second
 - B. Measurement of PEFV is often easily accomplished in children 3 to 6 years old
 - C. Scalene muscle contractions are more suggestive of severe obstruction than are subcostal and intercostal muscle retractions
 - D. The absence of wheezing excludes the possibility of asthma
443. Which of the following agents is contraindicated in the management of hypertension from acute cocaine intoxication?
- A. Benzodiazepines
 - B. Metoprolol
 - C. Nitroglycerin
 - D. Phentolamine

444. A 25-year-old woman presents with worsening lower abdominal pain 3 days after being evaluated and treated in the emergency department for vaginal discharge. She was given ceftriaxone intramuscularly and discharged with a prescription for doxycycline. She is afebrile; pelvic examination reveals mucopurulent vaginal discharge, cervical motion tenderness, and bilateral adnexal tenderness, although greater on the left than on the right. Urinalysis and urine pregnancy test results are negative. Which of the following statements regarding her return visit is most accurate?
- A. A positive *Chlamydia* culture result alters management
 - B. Admission is required
 - C. Obtaining abdominal/pelvic CT is most likely to delineate the diagnosis
 - D. Pelvic ultrasonography is indicated
445. An 80-year-old man presents with acute-onset severe, diffuse abdominal pain associated with nausea and multiple loose stools. He takes no medications. Vital signs are blood pressure 145/100, pulse 120, respirations 24, temperature 37.5°C (99.5°F), and oxygen saturation 98% on room air. Abdominal examination reveals minimal nonspecific tenderness, and rectal examination is unremarkable. Laboratory test results are unremarkable. An ECG reveals an irregular rhythm but no ST- or T-wave abnormalities. After multiple doses of narcotics, the patient still has severe pain. Which of the following tests is most useful to perform next?
- A. Abdominal CT angiography
 - B. Acute abdominal plain film radiography
 - C. Right upper quadrant ultrasonography
 - D. Serum lactate measurement

446. An 8-year-old girl presents with left arm pain after falling while playing in the snow. Radiographs are obtained (Figure 64). Which of the following statements regarding this injury is correct?
- A. Associated radial nerve injury is common
 - B. Radial head dislocation is uncommon
 - C. Recurrent dislocation of the ulna is a possible complication
 - D. Short arm splinting is preferred in adult patients



Figure 64

447. Which of the following is more characteristic in a patient with community-acquired pneumonia compared to health-care-associated pneumonia?
- A. Antibiotic use within the past 90 days
 - B. Home infusion therapy
 - C. Long-term hemodialysis
 - D. Outpatient elective arthroscopy 2 weeks earlier
448. A mother brings in her 8-month-old daughter for evaluation of vomiting and diarrhea of 36 hours' duration. Vital signs include pulse 195, respirations 32, temperature 37.1°C (98.8°F), and oxygen saturation 98% on room air. The nurse is concerned about the patient's heart rate and obtains an ECG (Figure 65). What is the best treatment for this infant at this time?
- A. Adenosine
 - B. Digoxin
 - C. Normal saline bolus
 - D. Synchronized cardioversion

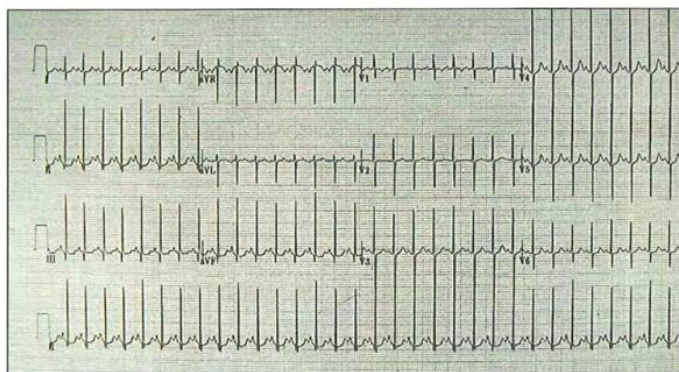


Figure 65

449. In which of the following conditions is the patient most likely to have a normal platelet count?
- A. Disseminated intravascular coagulation
 - B. Excessive hemorrhage
 - C. Hemolytic uremic syndrome
 - D. von Willebrand disease

450. A 68-year-old woman with a history of hypertension, diabetes, and heart failure presents by ambulance after passing out in church. She reports no prodromal symptoms, chest pain, or shortness of breath and does not remember the event. Vital signs include blood pressure 150/75, pulse 104, respirations 14, and oxygen saturation 99% on room air. Glucose is 124 mg/dL measured by fingerstick. Physical examination and ECG are normal. Which of the following statements regarding appropriate disposition is correct?
- A. She can be safely discharged home based on the normal ECG
 - B. She can be safely discharged if orthostatic vital signs are normal
 - C. She is at risk for adverse events and should be admitted for cardiac monitoring
 - D. She should be admitted for placement of an implantable cardioverter-defibrillator

Demographic and Evaluation Questions

Answering questions 451 through 460 is required to complete this activity for AMA PRA Category 1 Credit™.

451. What is your age?
- A. 30 years old or younger
 - B. 31 to 40 years old
 - C. 41 to 50 years old
 - D. 51 years old or older
452. What is your board certification status?
- A. Board certified in a specialty other than emergency medicine
 - B. Board certified in emergency medicine
 - C. In training in emergency medicine
 - D. Other
453. The Learner Objective for *PEER VIII* is as follows: "On completion of *PEER VIII*, you should be able to demonstrate cognitive expertise on topics from 'The Model of the Clinical Practice of Emergency Medicine' and preparation sufficient to pass an emergency medicine written certification examination." To what degree did *PEER VIII* satisfy this objective for you?
- A. Great degree
 - B. Moderate degree
 - C. Small degree
 - D. I did not purchase *PEER VIII* to prepare for an emergency medicine certification examination
454. What was your primary reason for purchasing *PEER VIII*?
- A. Earn CME credit
 - B. Prepare for the ABEM continuous certification examination
 - C. Prepare for the ABEM qualifying examination
 - D. Review the emergency medicine core content
455. What is your opinion of the number of questions in *PEER VIII*?
- A. Just right
 - B. Too few
 - C. Too many

456. What is your opinion of the difficulty of the questions?
- A. Just right
 - B. Too easy
 - C. Too hard
457. What is your opinion of the answer explanations?
- A. Just right
 - B. Not enough explanation
 - C. Too much explanation
458. To what degree are the explanations evidence based and presented without bias?
- A. Great degree
 - B. Moderate degree
 - C. Small degree
 - D. Not sure
459. How does PEER VIII compare to other content review/self-assessment programs?
- A. I have not used other programs
 - B. PEER VIII is about the same as other programs
 - C. PEER VIII is better than other programs
 - D. PEER VIII is not as good as other programs
460. Please tell us about your PEER VIII experience, what worked, what should be improved, how it will change your approach to patient care, and so on.

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Figures 1, 26, 37, 54, 64, 65

Mary Jo Wagner, MD, FACEP

Figures 2, 4, 5, 7, 8, 18, 20, 33, 34, 39, 51, 55, 61, 63

Joshua Broder, MD, FACEP, www.EMPACS.org

Figure 3

Tiffany Weiss-Feldkamp, DO

Figure 6

American College of Emergency Physicians; Mattu A, Tabas JA, Barish RA, eds. *Electrocardiography in Emergency Medicine*. Dallas, TX: American College of Emergency Physicians; 2007. www.acep.org/bookstore, and Jeffrey Tabas, MD, FACEP

Figures 9, 11, 12, 13, 16, 21, 23, 28

Michelle Doriswan, MD, FACEP

Figure 10

American College of Emergency Physicians; Mattu A, Tabas JA, Barish RA, eds. *Electrocardiography in Emergency Medicine*. Dallas, TX: American College of Emergency Physicians; 2007. www.acep.org/bookstore, and Nora Goldschlager, MD

Figures 14, 50

Loren Yamamoto, MD, MPH, MBA, FAAP, FACEP, <http://www.hawaii.edu/medicine/pediatrics/pemxray/pemxray.html>

Figures 15, 24, 44, 48, 57, 59, 60

Jeffrey A. Tabas, MD, FACEP

Figures 17, 35

American College of Emergency Physicians; Mattu A, Tabas JA, Barish RA, eds. *Electrocardiography in Emergency Medicine*. Dallas, TX: American College of Emergency Physicians; 2007. www.acep.org/bookstore

Figures 19, 32

Tracy Sanson, MD, FACEP

Figure 22

Craig Smollin, MD

Figures 25, 42

New Zealand Dermatological Society Incorporated, <http://www.dermnetnz.org>

Figures 27, 31, 49

Linda Regan, MD, FACEP

Figure 29

G. Patrick Daubert, MD

Figure 30

Mike Cadogan, MB, ChB, FACEM, www.lifeintheeastlane.com

Figure 36

Christopher Ross, MD

Figures 38, 52, 56

John Ballaz, MD, RDMS, FACEP

Figure 41

Centers for Disease Control and Prevention Public Health Image Library and Dr. Thomas F. Sellers/ Emory University, <http://phil.cdc.gov/phil/home.asp>

Figure 43

Robert A. Rosen, MD, FACEP

Figure 45

Rianne Page, MD

Figure 46

Interactive Medical Media, LLC, <http://www.dermnet.com>

Figure 47

University of Iowa Department of Ophthalmology and EyeRounds.org, <http://webeye.ophth.uiowa.edu/eyeforum/atlas/pages/Central-Retinal-Vein-Occlusion-CRVO-2.html>

Figure 58

Centers for Disease Control and Prevention Public Health Image Library and Dr. James Gorkany, <http://phil.cdc.gov/phil/home.asp>

Figure 62

Hans House, MD, FACEP

“Where’s that question about...?”

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